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An Address
ON
THE HOSPITAL UNIT IN UNIVERSITY WORK.

Delivered before the Northumberland and Durham Medical Society

BY WILLIAM OSLER, M.D., F.R.S.,
REGIUS PROFESSOR OF MEDICINE, OXFORD.

GENTLEMEN,—I offer no apology for bringing before you an academic subject. Though the society has no direct university affiliation, as individual members you are interested in the development of the profession, and you take a pride in the rapid growth of the provincial universities, among which that of Durham, the northern sister of Oxford and Cambridge, takes precedence. What is university work? What is a hospital unit? What connexion have they with each other? And what interest have they for us, and for the community at large?

THE FUNCTIONS OF A UNIVERSITY.

All are agreed that a university has a dual function—to learn and to advance learning. I use the word "learn" in the old sense—met with in the Bible and still used colloquially—as it expresses the mental attitude of the student towards his *alma mater*, "*totius litteratorii studii altrix prima.*" In mind, manners, and morals the young man seeks life's equipment when he says to his *alma mater* in the words of the Psalmist, "O learn me true understanding and knowledge." To learn the use of his mind, to learn good manners, and to learn to drive Plato's horses, form the marrow of an education within the reach of every citizen, but to which universities minister in a very special way; and it should be comprehensive, fitting a man in Milton's words "to perform all the offices, private and public, of peace or of war." The other great function of a university is to advance learning, to increase man's knowledge of man and of nature. Looking over the lecture list of any modern university one is impressed with the bewildering complexity of subjects taught, from Homer to Victor Hugo, from Tamil to internal secretions; but they may be roughly grouped into those dealing with man and those dealing with the cosmos about him. At any time these 800 years this division has been recognised, and though we have travelled a long way from the seven liberal arts which once comprised the whole range of study, it is not so much the nature of the subjects or their division that characterises modern education as a new spirit, a new attitude of mind towards them. No real progress was made until we returned to the Greek method—the pursuit of knowledge for its own sake. Out of the laboratories, as the result of work done by men absorbed in study and usually without the slightest bearing upon practical problems, came the three great revolutions of the nineteenth century—the annihilation of time, the substitution of the machine for the hand, and the conquest of disease. Physics, chemistry, and biology have given us control of the forces of nature. Faraday has harnessed Niagara, the power of which is now transmitted hundreds of miles away; the Curies have found the magic vril of Bulwer Lytton's "Coming Race"; and Pasteur has revealed one of the greatest secrets of life. It is characteristic of modern conditions that, hovering on the borders of the charmed circle of pure science, are those keen to turn every discovery to practical use. What good is knowledge unless it can be utilised in the service of man, asks a utilitarian age? The university of to-day, while ministering to the advancement of learning, is ready to teach how to make the learning profitable, so that everything in practical science, from household economy to aviation, finds its place. Schools specially adapted to special needs stand out as dominant features in the new programme, and Oxford and Cambridge, as well as Newcastle, Leeds, and Bristol, have felt the strong impulsion to develop the science which deals with human well-being. Of the old faculties which made up the *studium generale* medicine has been the one most profoundly affected by growth of modern science. What a revolution in our generation! Anatomy, physiology, and pathology, with their subdivisions of histology, embryology, physiological chemistry, and pharmacology, are now in laboratories controlled by specialists, whose ideals and work differ in no respect from those of their colleagues in the departments of physics, chemistry, and biology; and in many places large separate institutes are devoted to these subjects. The urgent need to-day is to extend this type of university work into our medical schools, so that *all* branches of the curriculum are included—medicine as well as pathology, surgery as well as anatomy, midwifery and gynæcology as well as chemistry. But here comes a difficulty—the practical schools which deal with these important subjects and their subdivisions are not under the control of the university, or at best have a very feeble affiliation. In this country the hospitals are either independent corporations, as here, or the medical school has evolved from the hospital, as in London, or there exists a mutual arrangement between the university and the hospital, as in Edinburgh. The difficulty is not insuperable—the same public-spirited citizens support both institutions; the hospital staff includes the teachers in the medical school. It only needs a rearrangement of responsibility, financial and educational.

THE HOSPITAL UNIT.

What is a hospital unit, and how can it be brought into line with university work? First a word on what a hospital stands for in the community. Primarily for the cure of the sick and the relief of suffering; secondly, for the study of the problems of disease; and thirdly, for the training of men and of women to serve the public as doctors and nurses. A majority of hospitals deal only with the first of these objects, and incidentally with the third. All agree that a study of the problems of disease and the training of men and women in the technique of the art come within the sphere of the university. England has suffered sadly from an absence of great medical faculties, such as exist on the Continent; and nowhere is this more evident than in the dissociation of the hospital from the university. One consequence has been that the hospitals have been built by men who had no idea whatever of their scientific needs, and too often staffed by men who knew little and cared less for anything beyond their primary function. The present plan of hospital administration is a legacy from a period when university ideals had not reached the practical side of our medical schools. I need not do more than to refer to the arrangement of the staff which exists everywhere—three or four physicians, two or three surgeons, one or two gynæcologists, other specialists, and a group of juniors who serve as out-patient assistants, waiting for promotion to the wards. The pathological department, often only a dead-house so far as the hospital is concerned, is in no way coördinate with the others. Laboratories of bacteriology, clinical chemistry, microscopy, and of clinical physiology may or may not exist. This English system, which has spread to the United States and to the Dominions, has worked well in some ways, and is responsible for the general excellence of the hospitals, large and small. Go where you may, from the cottage hospital to the big city infirmary, the internal economy, so far as cleanliness, general care of the patients, and nursing, is admirable. Speaking from a comparatively wide experience of hospitals, I say unhesitatingly that the average level of comfort and care is nowhere so high as in this country, and in no small measure is this a tribute to the character and training of the women connected with them. But there are very glaring defects, foremost among which is the absence of proper laboratory accommodation in pathology, bacteriology, clinical chemistry, and microscopy. Time and again in large well-arranged hospitals I have asked for the pathological laboratory, and have been shown a dead-house; for the clinical laboratory, and have been told that it did not exist; and have been chagrined to find that even in so simple a matter as the determination of the nature of a tumour, or the bacteriological examination of a fluid, the institution had to depend upon the excellent clinical research laboratories of London. But an equally grave defect is in the internal organisation. The general hospitals, even those connected with medical schools, are as a rule overstaffed, four physicians or three, where there should be but one or two, and the same with the surgeons. On the other hand, in many the resident staff is miserably inadequate, and their time so taken up with routine that any scientific study of cases is impossible. A keenly interested physician has a capable house physician in good training—off he goes at the end of six months! and

the same weary process begins of putting a fresh man into harness. In the very best hospitals, with medical school affiliation, the arrangements are on old and very unsatisfactory lines. In long, uphill years the ambitious young man goes through the position of resident physician, medical registrar, assistant physician, and at 40 (if he is lucky!) gets wards. Then a visit two or three times in the week with a house physician, a certain amount of teaching, and possibly some laboratory work, but he has a living to get and practice becomes the first consideration. He has precious little pay, if any; there are no paid assistants; there is no continuity in the organisation; in fact, there is no organisation on modern lines. This can be changed if we can convince the authorities that the subjects of clinical work come directly within the sphere of the university, and that certain hospitals must be adapted to meet the demands of the scientific study of disease and the scientific training of students. The problem is how to place a dozen or more teachers in every medical school in the same relation with the university as the professors of physiology and of physics—how to give to each one of them a department organised on university lines, in which the three functions of a hospital may be utilised and coördinated. The hospital unit meets the condition—a department under the complete control of the university, or under the joint control of hospital and university. Take a medical faculty with, say, 300 students, for which the necessary hospital accommodation would be about 500–600 beds, a unit would represent a clinique in the continental sense, of which there would be five or six major, and as many minor—the former including medicine, surgery, midwifery and gynæcology, pyschiatry and neurology, pædiatrics, and ophthalmology; the latter, dermatology, dentistry, laryngology, otology, syphilis, and genito-urinary diseases. There might be, as at Berlin and Vienna, two or three medical and the same number of surgical units. In Vienna, for example, there are three completely equipped midwifery and gynæcological units, each with lecture rooms, laboratories, rooms for students, and the whole paraphernalia for teaching and research.

THE ORGANISATION OF THE UNIT.

Let us take medicine, the one with which I am familiar. The components are the professor or director, 60 or more beds, an out-patient department, four or five laboratory rooms, and a staff. Let us deal with these in detail.

The *Professor* has three duties—to see that the patients are well treated, to investigate disease, and to teach students and nurses. He should be a man with wide sympathies and of trinocular vision. He should have a comprehensive and thoroughly scientific training, and should enter clinical medicine through one of three portals—physiology, chemistry, or bacteriology and pathology. He must be keenly practical, keenly scientific, fond of his patients, fond of his work, and devoted to his students. He should live as much in his wards and laboratories as do his colleagues in their laboratories of anatomy, physiology, chemistry, or physics. The question at once comes up, Is this possible? Can we expect surgeons, physicians, obstetricians, and specialists to devote themselves entirely to University work, and to carry out the three functions of the hospital, without regard to the public outside? Theoretically it sounds feasible, but in practice I do not believe it to be possible. In the case of a successful teacher with a widespread reputation, the public, to say nothing of the profession, could not be kept away from him. But it would not be unreasonable to ask such a man to devote at least one-half, or even more, of his time to the hospital duties. For the heads of the different units the university would go into the open market and seek the best men available. Under our present system the university choice of professors in the practical departments of the faculty of medicine is, as a rule, limited to men who hold hospital positions in a town. It is encouraging to see that the provincial universities are departing from this old practice, and I am very glad that you lost your distinguished townsman, Dr. George Murray, who was appointed to the chair of medicine in Manchester.

But it may be urged—have we not heard that the day of the pure clinician is over?—did not our *Opsonator maximus*, Sir Almroth Wright, pronounce his funeral oration a few months ago at the Royal Society of Medicine? Do not listen to him—*Clinicus perniciosus*, to quote Mindererus, with vision so myopic that he can see only applied bacteriology in clinical medicine. As is the twig, so is the tree, and with his upbringing such opinions are perhaps natural; and it is not for me to abuse an old friend, of whose good work no one has a higher appreciation. But in these days so winged are Sir Almroth Wright's words that they fly far and need a protest from one who has been keenly alive to every bacteriological advance in medicine. Think of what would have happened if a man of Sir William Broadbent's wide sympathies, clear judgment, and enthusiasm had had a great modern clinique at St. Mary's Hospital, such as those of Leyden or of Kraus at Berlin—do you suppose the bacteriological tail would have wagged the clinical dog? Far from it! Sir Almroth would have done just as good work as director of the bacteriological laboratory of the clinique, and vaccine therapy would not have received such tardy recognition, and would have been in just as satisfactory, or possibly in a more satisfactory position. A striking comment, too, on Sir Almroth's claims is the fact that the medical and surgical staff at St. Mary's are still on duty!

Patients.—In the case of the medical clinique the number will depend upon the size of the medical school. In a hospital to which many acute cases are admitted a male and a female ward with about 30 beds each, and with a few small extra rooms, would furnish ample clinical work for a senior class. There are continental cliniques in which double this number of patients are treated, and the matter is one for organisation. To make the teaching and the work of the unit effective, it is essential to give the professor control of an out-patient department, with proper arrangements for the study of the cases and for the teaching of the junior students. In how many out-patient departments is the university side of the hospital problem considered?

Laboratories.—It is a characteristic of modern medicine that every available science is pressed into her service in the study and treatment of disease. Any sort of rooms will do for laboratories. The very best of work has been done with the meanest sort of equipment. The ideal plan is that followed in certain hospitals, the new cliniques, for example, of the Cochin in Paris, in which each unit consists of two wards on either side of a central building, the lower floor of which is devoted to administration, and the upper to laboratory purposes. In every way it is a convenience to have the laboratory rooms in close proximity to the wards, and when feasible they should form an essential part of the unit, but for the sake of economy they may be merged, and all the pathological work concentrated in one building. Nowadays provision should be made for (1) cardio-respiratory physics and physiology: (2) bacteriology and vaccine therapy; (3) chemistry; (4) microscopy; (5) X ray and electrical work; and (6) a general laboratory for the students. From the standpoint of the teacher the most important of these is the large laboratory for the students, in which the subject of clinical microscopy is systematically taught to the juniors, each man having his own place and his own microscope, and in which the seniors work while acting as clinical clerks. No benefaction to the Johns Hopkins Hospital was more helpful to the medical school than that in which some kind friends gave the necessary money for a clinical laboratory. The best general clinical and pathological laboratory I have seen lately is that newly opened at the hospital which gave me my start in life, the Montreal General. The arrangements for students are admirable.

The staff.—The present arrangement existing in almost all English, American, and Dominion hospitals is antiquated, and in every way ill-adapted to modern conditions. A man is given a house physicianship for six months, or possibly a year; there is a senior resident physician, and there are laboratory assistants, who may or may not be at the disposal of the professor. Gradation, permanency, and specialisation should prevail as in any other university department. There should be four groups. First, the senior assistants nominated by the professor, holding university as well as hospital appointments, and who should be prepared to remain for an indefinite number of years. In a clinique of moderate size three such could be utilised. The first assistant, a man of some maturity, should be in full charge of the department in the absence of the professor. The position should be made attractive and ample opportunities should be given for original work and for teaching. From this group the professoriate throughout the country would be recruited. Secondly, the junior assistants, house physicians, appointed

annually and by competition from the members of the senior class. Thirdly, laboratory chiefs, who need not be resident; but it is a good plan to have one of the senior assistants in charge of the laboratories, and one who is at the same time responsible for the laboratory teaching of the students. The arrangements vary greatly at different cliniques in accordance with the leanings of the professor towards chemistry, physiology and physics, or bacteriology. Fourthly, an out-patient staff made up of assistant professors in the department, as a rule men in private practice, and who are in charge of the junior teaching. At the Johns Hopkins Hospital we had three men in charge of the medical out-patients, each of whom took two days in the week, each with his own staff of assistants and a group of students assigned as clinical clerks. Special out-patient departments may be managed by the clinique; for example, the Tuberculosis Dispensary, which at the Johns Hopkins Hospital, under the care of Dr. Hamman, has grown to be one of the most important departments of the hospital.

Teaching.—Entering one of the clinical units, a student should be made to feel a part of it, having his share in caring for the patients and in studying the disease, and even in the teaching. He should be made to feel that the hospital is his home. This has been one of the special boons enjoyed by the British medical student in his senior years; the hospital has been in reality the medical school, and there has not been that disassociation between the two which exists too frequently elsewhere. The teaching should be entirely practical. In a few systematic lectures some of the more rare affections may be considered. Brought into daily contact with disease, the students gradually learn to recognise it, and are taught the management of patients. In clinical lessons and in demonstrations the professor and the assistants would in the course of a year cover the ground very thoroughly. In amphitheatre cliniques it is easy to keep all senior students in touch with the department, while the special group, acting as clinical clerks, spend the greater part of their time in the wards. The five years of the curriculum should be divided equally, and the 30 months given to the hospital would enable a man to go the rounds of the departments and get a very full insight into the work. Hospitals have no vacations, and the old-time vacations should be done away with, and the school year divided into quarters, during which the work would proceed continuously. A man could take a week or so of vacation when he felt it was necessary, but it is high time a stop was put to an atrocious waste of time on the part of the students. The professor and his assistants should keep in mind the fact that the men entrusted to their care are to become practitioners, and as far as possible the practical work of the wards should be done by them. Upon one thing I would insist—that every assistant connected with the clinique taught. A few exceptional men, like the distinguished physicist, the late Professor Rowland, are really too good to teach; but for the majority, daily contact with students, and a little of the routine of teaching, keep us in touch with the common clay and are the best preservatives against that staleness so apt to come as a blight upon the pure researcher.

Research work.—Just as the big chemical laboratory of the university exists for research, so should the clinical units help to advance our knowledge of the causes of disease and of its treatment. The problems are innumerable, and in a well-organised clinique there will be men working at them in almost every department. A few of the better students may always be utilised for this purpose. The important thing is to keep one section at least of the clinique well in the fighting line, battling with the problems of to-day, in metabolism, immunity, cardio-respiratory physics, &c.

The other units would be organised in the same way, and, as I remarked, in large schools there could be three, or even four, medical and surgical cliniques. The important thing is to organise each unit on university lines. For example, the professor of psychiatry should be *ex-officio* in charge of the city asylum, managed as one of the departments of the university, and into which, as a matter of routine, each medical student would pass for one of his ten hospital trimestres.

The truth is, we need an active invasion of the hospitals by the universities. But—and here comes the rub—the universities must be willing to undertake their share of the expenses, and the men in charge of the units must be paid salaries sufficient to enable them to devote one half at least of their time to hospital work—to give it the first place in their lives. At present in many places, indeed one may say everywhere, the university does not pay enough for its hospital privileges. How much, I would like to know, does the University of Durham pay to the Royal Victoria Infirmary? Nowadays the physicians and surgeons give their time, but the public, through university channels, should pay this group of men, not only to care for their sick poor, but to train their doctors and nurses, and to study for them the problems of disease. It is impossible to separate the three primary functions of a large hospital, of the machinery of which the medical student is just as much a part as the nurse, and so involved are the new methods of diagnosis, of laboratory treatment, and of research with the utilisation of skilled scientific assistants that it would puzzle anyone to assign the proportion of cost to A, B, or C. A good rule is that followed at the Johns Hopkins Medical School—the University paid half of the salaries of those members of the staff who were directly engaged in teaching and one half, I think it was, of the laboratory expenses.

As the old order changes new developments must be met, and here in the provinces, less hampered by traditions and not tied in the chains of vested rights, you can reorganise the hospitals on these lines through the universities. I have not been discussing Utopia; it is being done elsewhere. In the United States and the Dominions these changes are rapidly progressing, and the hospitals, for example as in Toronto, are being built on a modern plan, with units such as I have described. It will take time and much money, but it can be done; in fact, it has to be done if British medicine is to adjust itself to the new conditions, and so maintain its splendid traditions. Nor is it a matter which concerns the mother country alone. In former days the over-seas students came here for all their work; now the majority of them take their qualifying studies at home and come abroad for post-graduate work. The students from various parts of the Empire should come to our universities and hospitals and find thoroughly organised departments, with laboratories as well equipped for the study of the problems of disease as are those of chemistry and of physics for the study of these subjects.

ON AUSCULTATION OF JOINTS.[1]

BY A. E. GARROD, M.D. OXON., F.R.C.P., F.R.S.,
PHYSICIAN, WITH CHARGE OF OUT-PATIENTS, TO ST. BARTHOLOMEW'S HOSPITAL, AND PHYSICIAN TO THE HOSPITAL FOR SICK CHILDREN.

THAT noises are produced in joints is a familiar fact, for such sounds are in some instances so loud as to be clearly audible to bystanders, and far more often attract the notice of the persons in whose joints they are produced. The loudest articular sounds are those which have little or no morbid significance, and, speaking generally, the most noisy joints are seldom those which are the seats of the more serious forms of disease. Apart from the more conspicuous reports and crackles above referred to, there are abnormal articular sounds, of much fainter character, which are only audible with the stethoscope, and, from experience gained from systematic examinations extending over some years, I have become convinced that auscultation affords valuable aid in the diagnosis of the several forms of morbid change to which the joints are liable.

The method of examination is very simple. The only apparatus needed is an ordinary binaural stethoscope, and any difficulty which may be experienced in keeping the mouth of the stethoscope accurately applied to the changing surface of a joint in movement is easily overcome by the use of a small chest-piece, or, better still, by affixing to the chest-piece one of the indiarubber ring coverings which are sold by instrument makers. A little practice enables one to dispense with any special chest-piece, and teaches how and where the instrument is best applied to the several articulations. Of all joints the knees are those which best lend themselves to such examination, and no difficulty is met with in keeping the chest-piece applied over the soft parts on either side of the patella. During the examination the joint should be slowly flexed and extended, either by the

[1] A paper read before the Medical Section of the Royal Society of Medicine on Jan. 24th, 1911.

patient himself or in a passive manner by the examiner. Auscultation of the shoulder-joint is also easy, and the sounds produced during rotatory movements, as well as during elevation and depression of the arm, may be alike studied. Nor is any serious difficulty met with in the application of the method to any of the larger joints, such as the elbow, wrist, or ankle. Even small articulations, such as the temporo-maxillary or the carpo-metacarpal joint of the thumb, admit of examination with the stethoscope.

I cannot pretend to give in this paper any complete or adequate account of the sounds heard in moving joints, nor of their diagnostic significance, for I can lay no claim to the knowledge required for the production of such an account. My aim is rather to direct attention to the value of this clinical method, and to stimulate others to employ it, in the hope that the accumulated experience of many observers may lead in time to a just appreciation of the meaning of the sounds and an accurate differentiation of their several varieties. Our knowledge of the meaning of sounds heard in auscultation of the chest has been built up by comparison of clinical observations with post-mortem findings, but the qualities of the sounds are in most instances indicative of the method of their production. Thus a pericardial friction sound strongly suggests its origin, and when we hear sibilus, the rush of air through narrowed passages is clearly indicated. Again from the time and distribution of a cardiac murmur the seat and nature of a valvular lesion may be inferred, and the inference drawn during life has been so often confirmed by examination after death that there is no longer any room for doubt as to interpretation, yet experience shows that even skilled observers sometimes are misled by clinical signs.

In the case of joints the opportunities of confirming our findings by actual examination of the parts are few, and therefore the acquisition of certain knowledge as to the meaning of articular sounds must be mainly a matter of clinical observation, checked by such information as X ray pictures afford—information which must, in the nature of things, chiefly relate to the condition of the bony structure. When examined with the stethoscope a normal joint of a young subject is silent. It is true that loud reports are sometimes produced in such joints, and can be produced by some persons at will. Such sounds have no morbid significance, and may be compared to the click produced by lifting a ball from a closely fitting socket; in other words, they are vacuum sounds.

In the joints of subjects past middle life abnormal sounds are often heard, even though the patient makes no complaint of his articulations, and is conscious neither of pain nor stiffness. They may be ascribed to the changes due to wear and tear, but experience teaches that in cases of incipient osteo-arthritis abnormal sounds may precede all subjective sensations. Thus when one knee is alone complained of, its fellow may exhibit well-marked auscultatory signs. On the other hand, silence of a joint is by no means a sure indication of health. In cases of synovitis, in which the articular surfaces are held apart by effused fluid, no sounds are heard, as a rule, but when the effusion has been absorbed a pronounced crackle becomes audible at any part to which the stethoscope can be applied, and this sound, to which the name of synovial crackle may be applied, is one of the commonest of morbid sounds heard in joints. Long after the attack of synovitis is past, especially in cases in which the joint which was its seat is apt to give trouble after any unusual use or strain, the synovial crackle may still be audible, and, as far as can be judged on clinical grounds alone, it would appear to indicate a swollen condition of the synovial membrane. In its most characteristic form it resembles closely the crackle heard when the stethoscope is applied to a region which is the seat of surgical emphysema.

It is not only when effusion is present that diseased joints are silent. A very limited experience of auscultation of tubercular joints leads me to believe that these are frequently or even usually silent, and the same is also true of joints affected by the more acute forms of rheumatoid arthritis, although in the later stages the synovial crackle is usually heard in them. This is in accord with the scanty post-mortem evidence available as to the condition of the joints in the acute stage of the disease in question, which tends to show that the joints themselves are at first but little implicated and that the inflammatory swelling is mainly periarticular.

The knee-joints of patients in or past middle life, and especially of women about the period of the menopause, are often the seats of pain and stiffness, which is especially felt in kneeling, or in going up and down stairs, and for which medical advice is sought. In such joints a peculiar abnormal sound is heard, especially well when the stethoscope is applied on either side of the patella. In characteristic cases this is rather a scrunch than a crackle, and has a wholly different character from the synovial sound already described. The character of the scrunch suggests abrasion of cartilages rather than synovial swelling, and radiograms of the articulation in which it is heard usually show slight but distinct evidences of osteo-arthritic changes. I am strongly inclined to think that this scrunch is an early and important sign of osteo-arthritis. It must be mentioned, however, that cases occur in which it is difficult to decide to which class the sounds heard should be assigned, and it is more than probable that in many instances the synovial crackle and osteo-arthritic scrunch coexist.

It should be mentioned that I have here employed the words rheumatoid and osteo-arthritis to designate distinct morbid conditions, which I believe to be manifestations of two distinct diseases, and that I believe the osteo-arthritic scrunch to be a physical sign of that process which results in fibrillation and erosion of cartilages and the formation of chondrophytes and osteophytes.

There is another articular sound which is much less commonly heard than either of those which have already been referred to, and which can usually be felt as well as heard. It is a rubbing noise which suggests the friction of ill-lubricated surfaces upon each other, and is such as might result from the movement upon each other of eburnated surfaces of bone. However, such an explanation is not tenable in view of the fact that after persisting for a time the friction may wholly disappear, and it is in the more advanced stages of rheumatoid arthritis, rather than in association with osteo-arthritic changes, that this abnormal sound is heard. Into one or other of the above-mentioned categories the morbid sounds heard in joints appear to fall for the most part. Lastly, the friction which may be felt over inflamed tendon sheaths produces a quite characteristic noise, which must be distinguished from those produced within the articulations.

To sum up, it may be claimed for auscultation of joints that this method is capable of affording early warning of troubles in articular structures and sometimes reveals the commencement of disease in joints which to inspection and palpation appear to be normal, and which may even cause no discomfort to their possessor. Again, the method gives promise of help in the differentiation of articular diseases, and in distinguishing between those in which the cartilages and bones are implicated, and those in which the synovial membranes and soft parts around the joints alone suffer. If these claims be justified auscultation of joints does not merely supply information which can be equally well obtained in other ways, but promises to lead to the extension of our clinical knowledge of the conditions in which it is employed.

Chandos-street, W.

TRANSPERITONEAL CYSTOTOMY FOR TUMOUR OF THE BLADDER,

WITH REPORT OF A CASE.[1]

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IT has long been recognised that the operative treatment of tumours of the urinary bladder is, to put it mildly, disappointing and unsatisfactory; indeed, such a well-known authority as Casper in his book on "Genito-Urinary Diseases" states that "patients do better and live longer without than with operation."

In considering this subject, we must remember that the vast majority of bladder tumours are epithelial in origin, that the majority of these are carcinomata, and that even the pathologically innocent tumours, the so-called benign papillomata, are often clinically malignant, inasmuch as they recur both *in situ* and as implantation tumours. We must

[1] Being a paper read before the Surgical Section of the Royal Academy of Medicine in Ireland on Nov. 18th, 1910.

also, however, remember that the bladder is poorly supplied with lymphatics, so that the growth of cancerous tumours is slow and that metastases are rarely formed.

At present the surgeon generally chooses the suprapubic route in attacking these tumours, as it is more satisfactory than the infrapubic, perineal, or vaginal route, and does not require the special skill and practice which enable a limited number of operators successfully to use the urethral route in selected cases. The suprapubic is, and probably will be, the operation of choice in dealing with tumours placed near the apex of the bladder; but, unfortunately, the great majority are situated at the base, and in dealing with these the disadvantages of this route are many and obvious. It is difficult to obtain a proper view of the growth. The hæmorrhage is difficult to control and further obscures the view. In the cases of malignant growths it is almost impossible to define their limits; and if the orifice of either ureter is involved, as it frequently is, the very greatest trouble is found in dealing satisfactorily with the severed ureter. There is also the danger of infecting the prevesical space.

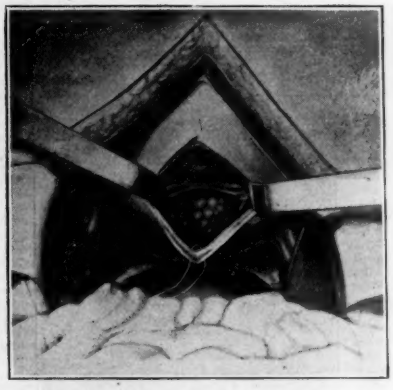
The results also of the suprapubic operations have been most disappointing. Watson (1) has compiled statistics of the result of 662 suprapubic operations for tumour. He found that in 287 performed for benign papilloma there was an immediate mortality of 10 per cent. and a recurrence of 20 per cent. inside three years. In 375 performed for malignant growths the operative mortality was 27 per cent. and the rate of recurrence 63 per cent. inside three years.

The operation of intra- or trans-peritoneal cystotomy, to which I wish to call attention, obviates all the difficulties of technique which I have enumerated above. At the same time it lessens the immediate mortality, and will certainly improve our end-results as it enables us to deal much more radically with the growth. This operation was first performed by Harrington (2) for an intractable case of hæmorrhagic cystitis. He described the operative technique in detail, and is entitled to all the credit of proposing and carrying out an original procedure. As far as one can judge from a study of the literature, this operation was not again performed until March, 1907, when C. H. Mayo (3) employed the technique of Harrington in dealing with a cancer of the base of the bladder. Up to the present, as far as I have been able to ascertain from a fairly extensive study of the literature, some 21 cases of tumour attacked by this route have been reported. C. H. Mayo in 1908 published reports of 5 cases; and Judd (4) has since reported 10 further cases from the Mayo clinic. Of these 15 cases 9 were carcinomata and 6 benign papillomata. There was only one death, and that occurred in a man of 71, who had half his bladder removed for cancer, and who died from uræmia a week later; at the post-mortem examination his kidneys were found extensively diseased. Scudder and Davis (5) in 1908 published four cases, three of papillomata and one of benign papillary cystadenoma of the prostate. All these cases recovered. Primrose (6) and Cabot (7) in 1909 reported one case each of cancer successfully dealt with by this route.

On analysing these 21 cases we find that a large part of the bladder was resected several times, a ureter had to be transplanted at least on four occasions, and twice the prostate was also enucleated. In spite of these radical procedures the mortality was less than 5 per cent., which compares with a 10 per cent. mortality in the series of cases collected by Watson, in which the suprapubic route was used and the tumour only removed without any resection of the bladder wall. As regards the frequency of recurrence, it is yet too early to speak. Up to the time of publication of Judd's paper there had been three recurrences in Mayo's cases, on two of which he successfully re-operated. If we take these two operations and the case now reported, we find the operative mortality further reduced, as there was only one death in 24 operations—i.e., a mortality of 4·1 per cent.

Operation.—After the bladder has been washed out and emptied the patient is placed in the Trendelenburg position. The peritoneum is opened by a long median incision extending for six inches or more up from the pubis. In malignant cases the interior of the abdomen is then carefully inspected, to eliminate the presence of metastases before proceeding further. If these are absent, as they usually are, or if the case is of a benign nature, the intestines are now carefully packed off with gauze. The superior peritoneally covered surface of the bladder is now seized with two forceps and a short median incision made into it. The interior is carefully swabbed out and the incision lengthened as much as necessary. In this way an excellent view is obtained. (Fig. 1.) If the tumour is pedunculated, it is grasped in forceps and removed with the knife or scissors, so that some of the normal mucous and submucous coats is also taken. The raw surface left should then be

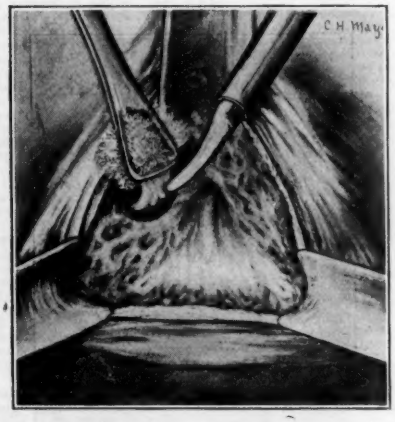
FIG. 1.



Note the long abdominal incision well retracted, intestines protected by gauze, low posterior incision into bladder, internal meatus, ureteral orifices, tumour, and traction suture. (Scudder, *Annals of Surgery.*)

cauterised with the Pacquelin cautery, or, if preferred, the whole removal may be performed with the cautery. (Fig. 2.) Sutures will not, as a rule, be required, as the cautery controls the bleeding, and the raw surface may be left to granulate up. In malignant cases the whole thickness of the involved part of the bladder wall, whether covered by peritoneum or not, must be removed, the section being made

FIG. 2.



Cautery resection of papilloma of bladder. (Mayo, *Annals of Surgery.*)

through normal tissue. In some cases as much as half of the bladder wall has been removed, and in others the floor of the space left after removing the tumour has been formed by the fibres of the levator ani. If the ureter is involved in the growth, its orifice is removed *en masse* with the tumour, and it is divided above the involved portion. Its distal end is then re-implanted into the bladder, either through a separate puncture (Fig. 3) or through the original incision, and fixed there with catgut sutures. On completing the intravesical part of the operation the bladder wall is completely closed by a double row of sutures, an inner Connell suture of catgut

(Fig. 4), and an outer peritoneal suture of fine silk (Fig. 5).

As a rule, the abdominal wound may be closed in its entirety, but if there has been any soiling of the peritoneum a drain may be left in for a few days. In a simple case it is not necessary to drain the bladder, as the patient generally passes urine voluntarily and at frequent intervals from the evening of the operation, and if there is any urethral spasm

FIG. 3.

Removal of large amount of bladder with transplantation of ureter. (Mayo, *Annals of Surgery*.)

a catheter can be frequently passed. Some operators, however, drain these simple cases by means of a catheter in the urethra. In severe cases, as for instance where the prostate has also been removed or a ureter transplanted, it is

FIG. 4.

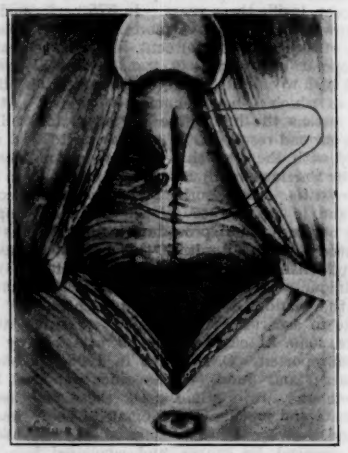
Showing method of closure of bladder incision. First row of sutures. (Mayo, *Annals of Surgery*.)

better to drain the bladder suprapubically through an independent incision into the bladder, made after the peritoneal cavity has been closed.

My thanks are due to the publishers of the *Annals of Surgery* for permission to use the accompanying illustrations.

Report of case.—The patient, a man aged 40, was sent to me by Dr. H. Powell of Nenagh. He complained of frequent attacks of painless hæmaturia during the past 12 months, each attack lasting several days. With the cystoscope I saw a large papilloma springing from the right side of the bladder, but it was impossible to clearly define its origin, as the floating papillæ, of which the bladder seemed to be full, constantly obscured the view. On June 1st I performed transperitoneal cystotomy as described. The tumour, which was of the size of a hen's egg, was pedunculated, the pedicle springing from the base of the bladder about an inch below and to the right of the right ureteral orifice, which was not interfered with. An excellent view was obtained, and the tumour was easily removed with scissors, a piece of normal mucous membrane being taken with it. The raw area left, which was about an inch square, was then cauterised with a Pacquelin cautery, and one stitch of catgut inserted to control a bleeding point. The bladder was sewn up as described, and was not drained. The abdominal wound was completely closed. The patient made an uninterrupted recovery, the wound healing by first intention. He passed urine voluntarily the evening of the operation, and continued to do so at frequent intervals. The urine was slightly tinged with blood for the first few days. On June 24th I again examined his bladder with the cystoscope, and could see the line of incision soundly healed, while the

FIG. 5.



Second row of suture closing the bladder. (Mayo, *Annals of Surgery*.)

site of the growth was marked by a small area of granulations. He went home the next day—that is, on the twenty-sixth day after operation, and was then able to retain his urine for five hours.

Note.—Since writing the above I find that Richardson in 1895 successfully performed transperitoneal cystotomy on two cases for the removal of large calculi on which the bladder had firmly contracted.[2]

Bibliography.—1. Watson: Annals of Surgery, December, 1905. 2. Harrington: Ibid., October, 1893. 3. Mayo, C. H.: Ibid., July, 1908. 4. Judd: Journal of the American Medical Association, Dec. 25th, 1909. 5. Scudder and Davis: Annals of Surgery, December, 1908. 6. Primrose: Ibid., December, 1909. 7. Cabot: Transactions of the American Association of Genito-Urinary Surgeons, vol. iv. 1909.

Dublin.

[2] Annals of Surgery, vol. xxxiii., p. 132.

KING'S COLLEGE (UNIVERSITY OF LONDON).—A course of four lectures on Recent Progress in Physiological Chemistry will be delivered in the Physiological Laboratory, King's College, London, by Dr. Otto Rosenheim, at 4.30 P.M., on alternate Mondays, beginning Jan. 30th. The subjects dealt with will be Inorganic Substances, Carbohydrates, Fats, Proteins, Lipoids; the Chemistry of Colloids and Enzymes. The lectures are free to all members of King's College, to all students of medicine, to all internal students of the University of London, and to medical men on presentation of their cards

PUERPERAL CONVULSIONS, OR ECLAMPSIA,

AT THE LIVERPOOL WORKHOUSE HOSPITAL.

BY WILLIAM ALEXANDER, M.D. R.U.I., F.R.C.S. ENG.,

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THERE is no disease where the results of treatment are so unsatisfactory and so uncertain as in puerperal eclampsia, and in few diseases are there so many, so varied, or such opposite methods of treatment. This arises from the imperfect knowledge of the disease that we possess and from the apparent facility with which serious cases rapidly improve, or the rapidity with which apparently favourable cases become worse or unexpectedly prove fatal. Hence the undue advocacy of remedies which have been followed by recovery in apparently hopeless cases by some medical men, and the low opinion of the efficacy of the same remedies by other medical men who have used them in apparently favourable cases that, nevertheless, turned out unsuccessfully.

A feeling of uncertainty is universal amongst medical men when called to treat a case of eclampsia, and a very guarded prognosis is always given. The necessity of judicious antepartum treatment is always insisted on, and no doubt the management of the pregnant woman is of great importance; but here again we have no certain methods of treatment that will always ward off eclampsia. Many years ago the writer had a share in the treatment of a lady who was attacked by albuminuria and œdema at mid-term. All the resources of medical knowledge were used to ensure the disappearance of the symptoms before delivery, and success, as far as the disappearance of albumin was concerned, was obtained and safety seemed assured. Nevertheless eclampsia set in post partum, and death took place in spite of all our efforts. On April 3rd, 1906, a woman, aged 19, a primipara, presented herself in the maternity ward suffering from œdema and albuminuria, and 7 months pregnant. She was sent to the general ward to be dieted, but went out against advice. We heard afterwards that she had been delivered naturally, after which the œdema disappeared.

Miss Aldworth, the sister in charge of the maternity wards, has made out for me a statement of the condition of the urine in the patients admitted there for the past five years. From this statement we find albuminuria present in 57 cases, accompanied by general œdema in 25 cases, accompanied by œdema of the lower extremities in 13 cases, albuminuria without any œdema in 19 cases. The quantity of albumin varied from a trace up to 16 grammes. All these cases were delivered safely without any eclampsia, but headaches, blurred vision, stupor, &c., are recorded in a few cases. Many of them were delivered without any preparation, but where possible salines and simple diet were prescribed, so far as time permitted.

The failure of preparatory hygienic measures to save from eclampsia the lady first referred to, and the impunity with which so many cases were delivered safely under the same apparent conditions, show that with the utmost care we cannot always avoid a catastrophe. Nor do carelessness and indifference always lead to one.

Below are brief notes of 38 cases of eclampsia.

Eclamptic Cases in Lying-in.

CASE 1.—Admitted Oct. 13th, 1903. Aged 25; married; primipara. Condition on admission: Os nearly fully dilated; trace of albumin in urine. Subsequent course: Fits began during second stage; had three; then chloroform administered and patient delivered with forceps of healthy child. Fits continued after delivery, patient having 11 during the next 12 hours and being semi-comatose between. Treatment: (*a*) Before delivery—blanket bath. (*b*) After delivery—(1) Enema; (2) potassium bromide (24 grains); (3) later, oxygen inhalation frequently. Progress: Fits ceased after 12 hours. Became more conscious; headache complained of. Fair quantity of urine passed. Bowels kept well opened with saline purgatives. Made good recovery and discharged in 13 days with still a slight trace of albumin in urine.

CASE 2.—Admitted Dec. 30th, 1904. Aged 25; married; primipara (stillborn) and one miscarriage. A week previous to admission face and hands began to swell. Condition on admission: Unconscious; os not dilated; urine loaded with albumin. Subsequent course: Two fits occurred during first stage; none during second. Natural delivery (child premature, decomposed). One fit during third stage and four during next eight hours. Treatment: (*a*) Before delivery: Bath; enema. (*b*) After delivery: (1) Dry cupping over kidneys; (2) pilocarpine nitrate (⅛ grain hypodermically four hourly); (3) oxygen inhalation frequently; (4) vapour bath; (5) potassium bromide (24 grains four hourly); (6) pulv. jalapæ co. (1 drachm, repeated in 12 hours); (7) copious enema. Progress: Fits ceased eight hours after delivery; patient continued drowsy. Milk and barley-water by mouth. Urine remained scanty and loaded with albumin for next 24 hours. Next day urine greatly increased, and less albumin. Recovery uninterrupted. Albumin disappeared from urine.

CASE 3.—Admitted Dec. 31st, 1904. Aged 23; single; primipara. Condition on admission: Os dilated to size of sixpenny-piece. Weak pains. Subsequent course: Delay in second stage. Chloroform administered and patient delivered by forceps of healthy child. Five hours after delivery she had a fit, a second after eight hours, and a third five hours later. Urine loaded with albumin. Treatment: (1) Chloral (15 grains), potassium bromide (24 grains), latter repeated four hourly; (2) calomel (5 grains); (3) cupping to kidneys; (4) pilocarpine nitrate ⅛ grain hypodermically); (5) oxygen inhalation. Progress: Had no more fits after third. Condition improved rapidly in next few days, urine becoming more copious and containing less albumin. Good recovery.

CASE 4.—Admitted March 19th, 1905. Aged 23; single; primipara. Fits began seven hours before admission—nine altogether. Condition on admission: Comatose; anasarca. Subsequent course: Had 11 fits in five hours. Urine scanty, loaded with albumin. Five hours after admission bougies were inserted into uterus; labour came on in 40 hours; no fits during this time. Patient delivered seven hours after labour began of stillborn, decomposed child. Treatment: (1) Vapour bath; (2) ice-bag to head; (3) pilocarpine nitrate (1/10 grain); (4) hot pack; (5) saline enema 1 pint. Progress: After delivery patient continued comfortable for 60 hours, when she had two slight fits in succession. A hot pack was given, and no further fits occurred. Urine during next few days increased in quantity, and the albumin decreased. Patient made good recovery.

CASE 5.—Admitted April 9th, 1905. Aged 36; married; V.-para. Had had gastric trouble for 14 days before admission. Fits commenced 13 hours before admission, several occurring. Condition on admission: Semi-comatose. Labour just commenced. Subsequent course: During first stage (which lasted 11 hours) patient had two fits. Second stage two hours and had no fits; natural delivery; child small, premature. Patient continued restless and delirious all day. Urine very scanty with trace of albumin. Treatment: (*a*) Before delivery—(1) Magnesium sulphate (90 grains three hourly); (2) enema; (3) saline injection (four hourly); (4) oxygen frequently. (*b*) After delivery—Hot pack, repeated after 16 hours, and again 9 hours later. Progress: Had no fits after delivery. Continued fairly well for three days, then became worse, incontinent, &c. Dull, listless. Temperature rose to 103° F. Died six days after delivery from stupor and asthma. Necropsy not granted.

CASE 6.—Admitted Dec. 18th, 1905. Aged 19; single; primipara. Condition on admission: Face, hands, abdomen, and legs swollen. First stage of labour well advanced. Subsequent course: Six hours after admission had a fit. Chloroform administered and patient delivered by forceps of full-term stillborn child. An hour later had a second fit. Slept well afterwards. Urine scanty; loaded with albumin. Treatment: (1) Enema, bath; (2) tr. scillæ (24 minims), spir. æth. nit. (24 minims), pot. acetat. 6 grains three hourly; (3) chloral (60 grains per rectum); (4) oxygen frequently; (5) calomel (5 grains), pulv. jalapæ co. (20 grains); (6) vapour bath. Progress: After second fit continued much better. Improved daily. Urine rapidly increased and albumin decreased. Uninterrupted recovery.

CASE 7.—Admitted Feb. 1st, 1906. Aged 22; single; primipara. Condition on admission: Slight pains. Os not dilated. Trace of albumin in urine. Subsequent course: Shortly after admission patient had a fit. During first stage (which lasted 12 hours) patient had 20 fits. An hour later delivered naturally of twins, having three fits during second stage. During next four hours she had 11 fits. Became incontinent, cyanosed, unconscious. Treatment: (1) Bath, enema; (2) calomel (5 grains), pulv. jalapæ co. (25 grains); (3) oxygen frequently; (4) hot pack; (5) morphia (¼ grain), atropia (1/75 grain), hypodermically; (6) croton oil (1 minim); (7) cupping over kidneys; (8) vapour bath; (9) potassium bromide (24 grains), chloral (30 grains per rectum); (10) venesection (14 ounces withdrawn); (11) ice-cap to head. Progress: Fits ceased four hours after delivery, leaving patient unconscious and cyanosed. Given liquor strychninæ hydrochloride (3 minims) and digitalis (1/50 grain) hypodermically, brandy (1 ounce). Temperature rose to 105·4° F., so was ice sponged. Saline enema (20 ounces) given. Three hours later strychnine and digitalis repeated. Breathing now difficult; mustard poultice given. Urine very scanty. Condition slightly improved during next 12 hours. The patient slowly grew worse and died next day. No necropsy allowed.

CASE 8.—Admitted Oct. 3rd, 1906. Aged 18; single; primipara. Condition on admission: Slight œdema of legs; small quantity of albumin in urine. Os dilated to size of a shilling. Subsequent course: First stage finished nine hours after admission. Two hours later delivered naturally of healthy, full-term child. Labour in all respects seemed normal. One hour after delivery patient had eclamptic fit, followed by a second and a third at intervals of 15 minutes. Did not regain consciousness between the fits. Treatment: (*a*) Before delivery—(1) Enema; (2) magnesium sulphate (90 grains, four hourly); (3) milk diet. (*b*) After delivery—(1) Copious enema; (2) oxygen frequently; (3) mist. diuretic. (1 ounce, three hourly). Progress: After the first three fits had passed off the patient became quite conscious and spoke rationally. Three hours after third fit she had a fourth, and then frequent attacks. Recovered completely. Went out quite well.

CASE 9.—Admitted Dec. 18th, 1907. Aged 22 years; single; primipara. Condition on admission: Os partially dilated. Urine contained large quantity of albumin. Subsequent progress: Delivered of healthy child three hours after admission; labour normal. Seven hours after delivery patient had an eclamptic fit and two more at intervals of ten minutes; conscious in interval. Transferred to surgical wards' where she had five more fits in one and a half hours. After this she remained comatose and died 28 hours after delivery. Necropsy: Œdema of lungs.

CASE 10.—Admitted Jan. 19th, 1908. Aged 20; single; primipara. Condition on admission: Feet, legs, and abdomen œdematous; face puffy and cyanosed. Os partially dilated. Urine contained small quantity of albumin. Subsequent course: Six hours after admission delivered naturally of healthy child. Seven hours after delivery patient had an eclamptic fit, and during next ten hours had seven more. Treatment: (1) Copious enema saponis; (2) magnesium sulphate (1½ drachms hourly); (3) hot pack (repeated in four hours); (4) morphia (¼ grain hypodermically); (5) ice cap to head; (6) potassium bromide (12 grains); (7) saline injection (1 pint); (8) mustard cloths to legs; (9) thyroid tabella (gr. v., one thrice daily). Progress: Slightly improved; quite conscious. Transferred to surgical wards. No more fits after this and no further treatment. Uninterrupted recovery.

CASE 11.—Admitted June 12th, 1909. Aged 33; single; primipara. Condition on admission: Os slightly dilated; restless; no pains. Subsequent course: Delivered naturally 22 hours after admission. After delivery remained comfortable for two hours, when she had a fit. Urine contained small quantity of albumin. Treatment: 1. Before delivery, for restlessness—nepenthe (15 minims). 2. After delivery, when fit occurred—(1) calomel (5 grains); (2) potassium bromide (24 grains); (3) haust. chloral (15 grains); (4) enema saponis (20 ounces) with glycerine (1 ounce); (5) milk diet, barley water. Progress: No fits occurred after the one mentioned above. No further complications. Recovery uninterrupted.

CASE 12.—Admitted Jan. 25th, 1910. Aged 22 years; single; primipara. Condition on admission: Unconscious. Had had eight fits before admission. Os dilated to size of a shilling. Moderate albuminuria (4 grammes). Subsequent course: Five minutes after admission patient had a severe fit. One hour after admission chloroform was administered, the os dilated with the fingers, leg drawn down, and patient delivered of stillborn, decomposed child. Second child decomposed, also delivered by traction. Placenta removed manually. Douched. Patient remained semi-conscious for three hours after delivery, when she died suddenly. Treatment: (1) Enema; (2) hot pack. Necropsy: Slight tear of cervix. Large clot in right auricle attached to tricuspid valve.

CASE 13.—Admitted July 25th, 1910. Aged 33; single; primipara. Condition on admission: Bowels not moved for five days. Feet and legs œdematous. Os slightly dilated. Subsequent course: Ten hours after admission patient had a fit. Urine scanty, loaded with albumin; contained blood. Fits continued at intervals of about one and a half hours for seven hours (five fits). After the first three patient was conscious; after the fourth she did not regain consciousness. After the fifth she suddenly changed, became ashen in colour, extremities cold (and apparently in dying condition). She was delivered an hour after the fifth fit of stillborn child. Two hours after delivery she had a slight fit, only twitching on right side. She now became comatose, with apparent paralysis of left arm and leg. She continued much the same all this day. Next day the temperature rose to 106° F., pulse rapid and weak, and she died comatose. Urine was suppressed last 48 hours. Treatment: (1) Enema saponis; (2) bromide of potassium (½ drachm), chloral (15 grains); (3) hot packs, two in succession; (4) chloral (15 grains per rectum); (5) saline injection per rectum; (6) chloroform. Necropsy: Hæmorrhage into ventricles and right corpus striatum. Lungs slightly œdematous. Kidneys congested.

CASE 14.—Admitted Sept. 11th, 1910. Aged 20; married; primipara. Fits began two and a half hours before admission, during which time she had seven. Condition on admission: Semi-comatose and as if recovering from a fit. Feet, legs, and lower abdomen swollen and œdematous. Slightly dilated os. Face cyanosed. Temperature 99° F.; pulse rapid, high tension. Urine loaded with albumin. Subsequent course: An hour after admission patient had a severe fit, and an hour later a second. With treatment she had recovered markedly and became conscious but dull. Continued so for about three hours, when she had a very severe fit. Never again became conscious. An hour and a half later she had another fit, became cyanosed, with later very difficult respiration, and died in five minutes, before time was given to empty the uterus. Treatment: (1) Hot pack; (2) morphia (⅓ grain); (3) bromide of potassium (24 grains); (4) mustard cloths to calves; (5) hot pack repeated; (6) pilocarpine (⅓ grain hypodermically); (7) bromide of potassium (1 drachm per rectum); (8) digitalin 1/100 grain hypodermically); inhalation of chloroform. Necropsy: Intense congestion of surface veins of brain. Excess of fluid over motor areas. Other organs apparently healthy.

CASE 15.—Admitted June 19th, 1901. Aged 31; single; II.-para. Very anæmic and debilitated. Normal delivery; child premature. Fits began five hours after delivery. Treatment: (1) Enema saponis; (2) chloral hydrate (1 drachm per rectum); (3) brandy. Recovery.

CASE 16.—Admitted May 21st, 1903. Aged 28; single; primipara. Fits began seven hours before admission. Condition on admission: Unconscious. Urine almost suppressed and contained abundant blood and albumin. Subsequent progress: Continued unconscious after admission for two days. Delivery took place two hours after admission. During this time she had nine fits. Child stillborn. Treatment: (1) Morphia (⅓ grain hypodermically); (2) oxygen frequently by inhalation; (3) pulv. jalapæ co. (1 drachm); (4) enema; (5) ether (15 minims hypodermically two-hourly); (6) cupping over loins. Progress: As stated above, patient remained unconscious for two days after delivery, then showed marked recovery. Died from syncope five days after delivery.

CASE 17.—Admitted Oct. 12th, 1901. Aged 16; single; primipara. Progress: Child born three hours after admission. Presentation transverse. Chloroform administered and version performed. Child full term—stillborn. Before delivery patient had three fits. After delivery fits occurred every half hour for eight hours, patient remaining unconscious between them. Albuminuria. Treatment: (1) Potassium bromide (12 grains), chloral (15 grains, three hourly); (2) oxygen inhalation; (3) soap and water enema; (4) nutrient enemata; (5) ice-cap; (6) morphia (⅓ grain hypodermically, four hourly); (7) calomel (½ grain on tongue every hour). Progress: 12 hours after delivery patient regained consciousness. After this uninterrupted recovery.

CASE 18.—Admitted April 13th, 1902. Aged 29; married; primipara. Had had fits for three days before admission and had been unconscious for 16 hours. Delivered naturally three hours after admission. Twenty minutes after delivery had a fit and became comatose. Urine loaded with albumin. Treatment: (1) Morphia (⅓ grain hypodermically); (2) potassium bromide (1 drachm per rectum); (3) rectal feeding. Progress: After delivery patient became comatose. Temperature rose gradually during next 24 hours to 103·8° F., when patient died.

CASE 19.—Admitted Dec. 17th, 1909. Aged 15; primipara; single. Delivered of a male child five hours before admission. Had one fit previous to confinement and five after; labour natural. On admission patient was unconscious and cyanosed. Urine: 10 ounces were drawn off; traces of albumin. Perineum lacerated. Treatment: (1) Hot pack; (2) mist. magnesii sulphatis; (3) croton oil (2 minims); (4) hypodermic morphia (3 minims, to be repeated in three hours if fits continue); (5) ½ pint hot saline per rectum; (6) bromide of potassium (24 grains four hourly); (7) tr. opii (10 minims four hourly); (8) saline (1 pint four hourly per rectum till attack diminish); (9) sinapisms to legs and feet; (10) ice cap to head. Result: Well on Dec. 29th.

CASE 20.—Admitted Feb. 19th, 1909. Aged 21; single; primipara. Taken suddenly ill at 5 P.M. Had nine fits in the hour before admission to hospital, and one after admission. Unconscious all the evening. Os dilated; girl born by forceps at 10 P.M. Baby normal, 6 pounds 4 ounces. Temperature rose to 103·4° F., and pneumonia set in from which patient died on Feb. 28th. Urine scanty and loaded with albumin; only one ounce of urine in bladder on admission. As fits ceased on admission attention was directed to the chest.

CASE 21.—Admitted July 26th, 1903. Aged 21; primipara; single. Confined at 2 o'clock the morning of admission. Was well till 7 o'clock when she complained of severe headache. At 8 A.M. friends saw her in a fit which lasted a few minutes and recurred at intervals of 20 to 30 minutes till her admission to hospital at 3 P.M. Patient was unconscious then, and had fits at 3.30, 4, and 4.30. She was unconscious till 8 P.M., when she regained consciousness but appeared dazed. From 4.30 to 8 P.M. rather restless, trying to get out of bed. At 8.30 P.M. fell asleep and slept till 12 o'clock when she became very restless and unmanageable and had to be towelled. After this she slept. Next morning she was much better. Urine 1018; albumin ¼. Treatment: Chloral and bromide, pilocarpine, enema aperient, milk diet. Patient febrile and restless for a few days, albumin becoming less and less, and disappearing on August 12th. Patient discharged well on the 22nd.

CASE 22.—Admitted Oct. 7th, 1907. Aged 22; primipara; single. Admitted at 3 o'clock in the afternoon, having been confined naturally that morning at 4 o'clock of a healthy child. At 11 o'clock she began to have fits and had seven up to the time of coming to hospital. After admission she had 11 in six hours. The face was much cyanosed and breathing stertorous between the fits. Urine scanty and loaded with albumin. Treatment: Venesection to 12 ounces; saline injections per rectum; bromides; morphia; hot packs. Patient died 1.15 P.M. on the 8th.

CASE 23.—Admitted April 13th, 1909. Aged 29; married; primipara. Patient's friends found her unconscious on the floor of her bedroom and brought her to the hospital. They said she had been suffering from headaches for several days before. On admission she was unconscious and cyanosed. Had a fit every hour for five hours. Urine drawn off (3 ounces) was loaded with albumin. In the evening labour commenced; os dilated naturally and child delivered by forceps. Fits had ceased before delivery. Treatment generally: Hot packs, enema saponis, oxygen inhalation, chloral (30 grains per rectum), stupes to chest, saline rectal injections, morphia, hot drinks, mist. magnesii sulphatis, ergotin for subinvolution. Result: Patient was discharged well on June 15th.

CASE 24.—Admitted Oct. 6th, 1899. Aged 20; single; primipara. Delivered naturally. Eclampsia set in on the eighth day of the puerperium. Urine was of specific gravity 1040 and loaded with albumin. Fits only lasted two hours; no œdema. Treatment: Poultices over the loins, salines internally, pulv. jalapæ co. Recovery was as rapid as the onset and the patient was discharged on Nov. 6th, cured.

CASE 25.—Admitted June 22nd, 1910, at 11 P.M. Aged 21; single; primipara. Condition on admission: Legs and ankles œdematous; face swollen. Urine contained moderate quantity of albumin. Had twitchings of arms and face, with vomiting. Subsequent course: Twelve hours after admission patient was delivered naturally of mature infant. Albumin gradually lessened and 11 days later had completely disappeared. No other complications. Convulsive twitchings ceased after delivery; no treatment necessary. Patient discharged on July 8th quite well.

CASE 26.—Patient, aged 32, was admitted to surgical wards Sept. 12th, 1910. Completely unconscious and with persistent twitching in right arm and hand. She was V.-para and was confined ten days before admission. The previous day she began to have fits which were diagnosed as eclamptic. The convulsions were sometimes on the right side and sometimes on the left. She became unconscious gradually, which deepened into coma before admission. When she came under observation the urine contained albumin and the twitching was entirely confined to the right arm and hand. In the afternoon of the 12th I trephined over the left motor area and found a collection of bloody serum (1 drachm) in a small, shallow, bowl-shaped depression of the convolutions beneath the arachnoid. This was let out, when the brain beneath was found to be dark-red in colour. The depression was drained and the wound closed. She had one slight attack of twitching in the evening, but none after. She never, however, recovered consciousness and died in 24 hours, the temperature rising gradually to 104·8° F. at the time of death.

A post-mortem examination showed the seat of the operation wound quite aseptic and so was the brain. There was considerable congestion of the lungs; the uterus was healthy, but the brain in both motor areas was the seat of effusion of blood that permeated the whole thickness of the convolutions and involved the left side more deeply than the right. The vessels, especially the veins on the surface of the brain, were gorged full of blood.

CASE 27.—Patient, aged 22, primipara, single; admitted on June 29th, 1880; died on July 2nd. Cause of death coma after eclampsia. Infant died on July 6th from debility.

CASE 28.—Patient, aged 21, primipara, single; admitted on Jan. 13th, 1882; delivered naturally on Jan. 14th, male child. Eclampsia during labour and the day after. Discharged cured on Jan. 28th.

CASE 29.—Patient, aged 19, primipara, single, was admitted on March 2nd, 1882; delivered naturally on March 6th of a female child who lived for five days. Mother suffered from eclampsia and was treated by chloral, having 20 draughts of that drug in the 84 hours during which she had the fits. Recovered completely.

CASE 30.—Patient, aged 24, III.-para, was admitted on Feb. 23rd, 1886; delivered naturally 15 minutes after admission of a male child. Eclampsia occurred, and was treated by baths and chloral. Recovered quickly and completely.

CASE 31.—Patient, aged 31, V.-para, was admitted on May 28th, 1893. She was delivered next day, breech presentation, of a macerated fœtus; eclampsia during third stage; labour assisted; post-partum hæmorrhage. Rapid and complete recovery; ergot, chloral, &c.

CASE 32.—Patient, aged 19, primipara, single, was admitted on Jan. 10th, 1895; delivered naturally five hours after admission. Eclampsia after; choral, poultices to loins, &c. Recovery rapid and uninterrupted.

CASE 33.—Patient, aged 22, single, primipara, was admitted on April 23rd, 1897; delivered naturally 4½ hours after. Eclampsia at end of labour. Temperature rose to 99° F. Recovered rapidly and easily.

CASE 34.—Patient, aged 19, primipara, single, was admitted on

Jan. 11th, 1888; delivered naturally 7 hours after of a male, stillborn. Uræmic convulsions for several hours. Chloral. Recovery excellent.

CASE 35.—Patient, aged 22, primipara, was admitted on June 21st, 1888; delivered naturally on the 22nd of a male child. Eclampsia with albuminuria post partum. Sent to general wards, where a rapid recovery resulted.

CASES 36 AND 37.—Two cases are tabulated in 1887 as having suffered from eclampsia; both recovered, but no particulars can be found.

CASE 38.—In 1882 a death from puerperal convulsions is reported on the third day; no details to be found.

CASE 39. *A supposed eclamptic.*—Patient, aged 20, primipara, single, was admitted to the lying-in wards on the morning of Oct. 21st, 1886, with convulsive seizures of a general kind, but without œdema or albuminuria. In the evening she had become unconscious, but the child was alive. Temperature over 101° F. Patient had been observed to be stupid and queer for a few days, getting up at night and drinking out of the water-jug, but no one thought much of it. When I saw her in the evening she was quite unconscious, the baby being still alive. The os was not dilated, labour not having commenced. Without requiring any anæsthetic the uterus was opened through the abdomen, and a living child extracted. The woman never moved during the operation and died soon after. A post-mortem examination revealed suppurative meningitis; a layer of yellow pus a quarter of an inch thick covered the whole encephalon. The child was adopted.

From a study of the notes of the cases recorded above, which were kindly collated for me by my house surgeon, Dr. William Messer, it will be seen that 30 were primiparæ and 5 multiparæ (I.–V.-para), 3 being unknown. The patients were married in 9 instances and single in 26, with 3 unknown. In 4 cases the urine contained only a trace of albumin, and 2 of these proved fatal. In one of these fatal cases the urine was scanty, but in the other no mention is made of the quantity. In the third case of scanty albumin it is recorded that the quantity was abundant. This patient recovered, and so did the fourth. The quantity of albumin has no direct relation to the gravity of the case, but the quantity of the urine has a very close inverse relation with the seriousness of the disease. In all the other cases the amount of albumin has been considerable; in many the urine was loaded. In one case the urine was sanguineous.

Onset of attacks.—In 5 cases the fits began before parturition set in; in 5 cases during the first stage of labour; in 6 cases during the second stage; in 1 case in the third stage; in 15 cases the attacks began post-partum, and in 1 case we have no clue to the time of onset. Of the post-partum onset the times varied from a few minutes after the termination of labour to as much as eight days after. In only 5 cases did the fits cease on delivery, and in one of these the fits had ceased before delivery.

If we take into consideration the great number of cases (15) where the fits began post-partum and add to them the large number where the attacks continued after delivery took place, it does not seem as if the presence of the child in the uterus had so much influence on the course of the disease as is supposed. We will revert to this question again in considering treatment.

Mortality.—Of the 38 cases recorded above the mortality was 34·2 per cent. The disease seems with us to be very largely on the increase, and the mortality has increased very much in proportion. For instance, during the 20 years 1880–99 inclusive we have on record only 12 cases that came into the lying-in wards, with a mortality of 2, or 16·6 per cent. During the years 1900—Oct. 15th, 1910 we have had 26 cases, with a mortality of 11, or exactly 42·3 per cent., over twice the total number and nearly three times the mortality. During the 20 years the 12 eclamptics occurred amongst 5978 obstetric cases, or an incidence of 1 in 498. During the 10–11 years the 26 cases occurred amongst 4055 cases, or an incidence of 1 in 156.

Is this increased frequency of the disease due to an increased sensitiveness of the nervous system in the young girls whom the disease most frequently attacks, or is it due to increased frequency of albuminuria? Until I made up the statistics of albuminuria in all the admissions for the past five years I had no idea that albuminuria was so common amongst the patients generally. We have no statistics during the first 20 years, when eclampsia was infrequent, to show whether albuminuria was less common amongst the bulk of obstetric patients then than it is now. Examination of all urines since 1906 showed the presence of albumin in 57 cases out of 2099, or 1 in 36·9. Eclampsia actually occurred in 15 cases during the same years, and if we add these to the 57 œdematous and albuminuric cases we have 72 cases liable to eclampsia amongst 2099 deliveries. The actual and potential eclampsias in 1906 were 10; in 1907, 12; in 1908, 5; in 1909, 15; and for 10 months of 1910, 23. The actual eclampsias in the same years were 2, 2, 1, 5, and 4 respectively. We may, therefore, congratulate ourselves that things were not very much worse, but such numbers of albuminuric and œdematous cases add tremendously to the anxieties of those in charge of the lying-in wards.

Treatment adopted.—A perusal of the brief notes of the cases in which the treatment is recorded will show the methods of treatment generally adopted.

The hastening of delivery was adopted in only 7 cases. In 5 cases forceps were used, and one of these was suffering from pneumonia at the time and died from that disease. In one case artificial dilatation of the os and version effected the delivery of a decomposed fœtus. The mother died suddenly a few hours later with a cardiac clot. Another transverse case recovered after delivery by version.

The delivery was natural in 29 cases. In one case labour had not really commenced, and the patient was so much better after admission that operative treatment was postponed. Some sudden severe attacks carried her off before the surgeon could be communicated with. The vessels of the encephalon were intensely congested and much fluid was found in the subarachnoid.

In the 28 natural deliveries one had recovered and was three days well, when she became listless and apathetic and died from asthenia. No necropsy was made. A second case was delivered of twins and had most severe attacks post partum; venesection and salines failed to relieve. A third died from œdema of the lungs, as verified post mortem, a disease that affects ordinary epileptics. A fourth died from apoplexy, with hæmorrhage into the ventricles and into the right corpus striatum. A fifth case had recovered completely and died from syncope 5 days after delivery. A sixth case had fits three days before admission. The temperature after delivery suddenly rose to 103·8°, and the patient became comatose and died rapidly. No post-mortem examination could be obtained. A seventh case had post-partum attacks. Venesection was performed, but the patient died. An eighth case had hæmorrhages into the grey matter of the motor area of both sides of the encephalon.

Two deaths occurred in 7 cases of operative emptying of the uterus, or 28·5 per cent.; and 9 deaths in 29 cases where nature was not interfered with, or 31 per cent. If we take the circumstances of the cases into consideration I think it will be conceded that very little difference can be made between the result of the two methods of treatment, and a study of the cases will show that the presence of the child in the uterus does not seem to have much influence either on the onset, the cessation, or the continuance of the fits.

Routine treatment consisted of *purgatives*, such as jalap, magnesium sulphate, calomel, and croton oil. *Diaphoretics.* Blanket bath, hot packs, pilocarpine, hot poultices over kidneys, saline diuretics, hot drinks. *Nerve sedatives:* Bromides, morphia, chloral in varied doses; fomentations to loin, dry cupping over kidneys, venesection of arm, ice to head and thyroid powder, chloroform and oxygen inhalations. Of these the bromides, morphia, and chloral are tried friends that have been freely used. The only drawback to their liberal use is the reflection that in case of failure the death may have been due to excess of medication. Fomentations to the loin, dry cupping, blanket baths, and hot packs are useful and always harmless. Pilocarpine is, I think, of great value. Thyroid was used in one case, but she was recovering when it was given, and we have no statistics of a sufficient series of cases of all kinds treated by this drug to show its real value. Venesection failed in the two cases in which it was adopted and seemed to hasten the end. Saline injections, either into the rectum or the subcutaneous tissues, are both of great value. Rectal salines, in conjunction with oxygen inhalations, have produced some startling improvements in many of our cases.

We will not here enter upon the pathology of eclampsia, but we think there is no doubt that in that disease there is intense congestion of the cerebral vessels and effusion of serum or of serum and blood over the cerebral convolutions, and sometimes rupture of cerebral blood-vessels. All of these incidents are well illustrated in the above cases. Case 39 is interesting for its simulation of eclampsia.

Liverpool.

THE RÔLE OF AUTO-INOCULATION IN MEDICINE:

A PLEA FOR ITS RATIONAL EXTENSION.[1]

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MY thesis readily divides itself into two arguments, which may be briefly stated as follows: Firstly, that a form of vaccine-therapy has long been applied, unconsciously but successfully, by physicians in their treatment of infective processes in the body. Secondly, that the success attending this practice might be increased if it were developed into a conscious aim under the guidance of recent knowledge of the subject of treatment by vaccines.

PART I.—*Empirical Treatment of Infective Diseases an Example of Vaccine-therapy.*

You will remember how gratified, as well as surprised, was M. Jourdain in Molière's comedy when it was discovered to him that for 40 years, unknown to himself, he had been talking "prose." When, however, it was pointed out to the medical profession that they had been practising the art of vaccine-therapy for generations, not knowing what they did, the initial surprise was followed, perhaps, by a feeling of annoyance. It was annoying to see how far empiricism had outstepped rational medicine and to find so late in the day an explanation of the success which had certainly followed the poulticings and fomentings of the past. M. Jourdain soon proved that the prose he had used for so long in ignorance was good prose, and the science of the *maître de philosophie* failed to improve upon it. So far the same might be said for medical practice—the fomentation is a good remedy, but a knowledge of the principles which govern its action does not appear at present to have improved its application. It is to be hoped, however, that a different experience to M. Jourdain's is to follow, and that recent knowledge will now enable rational medicine to steal a march on empiricism.

Up to the present the local application of heat by poultices and fomentations has stood as the example of "empirical vaccine-therapy." To these might be added numerous other homely, and sometimes barbarous, remedies directed to the same end, such as the sucking of infected wounds, and the dressing of these with hypertonics and irritants, such as salt and pepper. All these remedies reinforced nature's method of meeting infection by an increased blood-supply to the offended part. But it is my object to show that the unconscious augmentation of irrigation and auto-inoculation did not stop with these simple remedies, but that the physician has held in his hands the weapons of the vaccine-therapist from time immemorial, and has, indeed, used them, too, with no inconsiderable success.

Nature was the earliest "vaccine-therapist." The processes by which infections are naturally overcome in the body form the basis on which the science of vaccine-therapy is being built up. As soon as the invader "lands" in a tissue there is a call for more blood, blood plasma acts on the microbe and its toxins, destroying them both by chemical processes (oxidation, hydration, dehydration, &c.) and by the action of specific antibodies, and leucocytes rush out to ingest the foe. If this proves insufficient further antibodies are formed in response to the toxins carried over the body in the blood stream, and the resistance of the plasma bathing the lesion is thereby raised.

We thus have two natural processes to study and imitate: 1. "*Irrigation*" of the infected area with plasma and leucocytes, and this by itself may be enough to cure a mild invasion. 2. *Auto-inoculation*, or the washing of the bacterial products into the blood stream to stimulate in the tissues the formation of antibodies specific to the invading micro-organism. These are the processes (other than the injection of vaccines) which the physician can direct with success, and it is this "natural vaccine-therapy" that was exploited with success in the time-honoured practice of applying heat (poultices, &c.) to an inflamed area. By this means not only was irrigation assisted, but such irrigation, itself of value, necessarily led to an increase of that auto-inoculation on which the improved resistance of the body depends. Such an effect is obvious so far as the poultice is concerned, but it is not so obvious, and it is my purpose to point out, how also the drug treatment of infective diseases may have depended for its success, so far as it has been successful, on a similar encouragement of these processes of "irrigation" and "auto-inoculation."

My contention will best be brought before you by its application to familiar examples. Let us consider infections of mucous membranes, and, in this connexion, turn to bronchitis, where there is general agreement as to the means to be employed.

Bronchitis.—It will not be disputed that the classical treatment of bronchial infections, though the outcome of empiricism, is, where thoroughly carried through, highly successful. It consists, shortly, in the giving of the so-called "depressant expectorants" till secretion is abundant, and then changing to the "stimulating expectorants," with perhaps, later on, certain of the balsams or volatile oils. This treatment is based on our experience that abundant exudation is necessary for cure. Abundant exudation implies either plus infection or adequate response, and the relative amount of these two factors in any given case demonstrates itself by the course which the disease takes.

If, now, we inquire into the pharmacological action of the "depressant expectorants," of emetine, of salts of antimony, of apomorphine, of the iodides, what do we find? We find that all these drugs cause a watery exudation through the bronchial mucous membrane. Emetine, antimony, and apomorphine are emetics, the two first through their irritant action on the gastric mucous membrane, the last by its action on the nervous centres in the medulla. Now, profuse secretion from the mucous surface of nose, pharynx, and bronchi is a constant by-product of the act of vomiting, as is also an increase in the sweat, tears, and saliva. But a similar effect is produced, though to a less extent, by sub-emetic doses of these drugs, and in this manner they become reliable expectorants. When we turn to the iodides we find a different pharmacological action; these substances are excreted through the bronchial and other mucous membranes and cause a watery flow by their local action. In some cases iodine itself is liberated, leading to the more striking irritant effects generally known as "iodism."

Thus it appears that these drugs, the classical standby in bronchitis with scanty exudation, though their mode of action varies, all lead to one result—namely, the bathing of the infected mucous membrane in a protective muco-serum, or, in other words, increased "irrigation." Given a sufficient blood-supply, they cause a rush of fluid through the newly formed mucous cells and glands on to the surface, imitating in an inaccessible area the osmosis we can so successfully obtain in a dry sinus by the local application of hypertonic solutions. Have we not here, also, an explanation of the value of emetics pushed to vomiting point in cases of bronchitis? That the removal of secretion by vomiting is not the sole gain by the administration of these large doses is shown by the benefit occasionally obtained from their use even when vomiting does not occur. Surely the increased flooding of the mucous membrane with healing serum is no small element in this favourable result.

At a later stage of catarrh, or in chronic bronchitis, the blood-supply to the mucous membrane may also be in default. This depends on the general blood pressure, which is generally raised above the normal in chronic bronchitis, perhaps as a compensatory measure. Now are used the "stimulating expectorants," squill and its congeners and ammonium carbonate. These also, like the depressant expectorants, are gastro-intestinal irritants and emetic in full doses, and in virtue of this action increase the secretion from the bronchial mucous membrane. At the same time they raise the general blood pressure by their action as vaso-motor and cardiac tonics, and hence increase the blood-supply to the bronchial tubes by both systemic and pulmonary blood channels.

Thus, again, by our treatment, we are "irrigating" the diseased area, supplying blood serum and perhaps leucocytes to the infected site in imitation of the natural process. When this is considered complete, we attempt to coax the mucous membrane back to conditions of healthy secretion by such mild astringents and stimulants as the volatile oils (copaiba, cubebs, eucalyptus, &c.) and terebinthinates (terebene, &c.).

[1] A paper read before the Therapeutical and Pharmacological Section of the Royal Society of Medicine on Jan. 17th, 1911.

It must be borne in mind, of course, that the peculiar position of the bronchial mucous membrane demands recognition also of a mechanism for the expulsion of secretion, in addition to the repulse of the invader, and to aid this mechanical action the use of drugs acting on the respiratory centre, such as ammonia and strychnine, is sometimes called for.

It will be remarked that most of the drugs we have mentioned are in request for other purposes besides that of expectorants, and it is interesting to note that in their other uses also their action might be interpreted as mainly one of "irrigation." In stomach catarrh we recognise the advantage of an emetic, though we do not always dare subject our patient, unless a child, to so unpleasant a remedy. We talk in this connexion of "emptying the stomach," but may not the most important result achieved be the "irrigation" of the stomach wall which is a necessary accompaniment of emetic action? The efficiency of ipecacuanha in dysentery, and its value in small doses in some catarrhal conditions of the gastro-intestinal tract clearly point to its known action as an "irrigator" of the diseased mucous membrane. Again, the terebinthinates and such volatile oils as copaiba and cubebs have had a recognised province in the treatment of infections of the urinary tract. Such an effect has been shown to have no clear dependence on antiseptic action, and is it not likely that their value has really depended on their irritant properties, or, in other words, on the "irrigation" they have caused? Examples might be multiplied, but I do not wish to waste your time or add to my own responsibility by wandering over too wide a field.

PART II.—*The Advances on Empirical Treatment suggested by a Consideration of the Principles of Vaccine-therapy.*

Now in all the examples we have considered the influence of the physician has been solely in the direction of irresponsible "irrigation." But Nature's armamentarium contains, in addition, the weapon "auto-inoculation," a weapon to be brought into use where "irrigation" alone has failed. The physician has neglected this weapon; he has been an "irrigator" pure and simple, whether with his poultice or in the drug treatment of bronchitis and other infective diseases. To be sure, auto-inoculation has necessarily occurred as the result of his irrigation, but has he directed it? Has he applied his fomentations at such intervals that time may be allowed between for the formation of antibodies? Has he calculated at what intervals he should auto-inoculate his phthisis cases to maintain most successfully their toxin immunity? Has he sufficiently calculated the dangers of hyper-inoculation and a "negative phase"? As a rule he has done none of these things, and it is with the hope of directing attention to the neglect of auto-inoculation in medicine that the present paper is presented to you.

It is hardly necessary in these days to indicate the lines on which the vaccine-therapist works; one must presume that the phases of a vaccination experiment are familiar to all. Suffice it to remind that a sufficient interval must be left between every two inoculations for the "negative phase" of immunity to be passed and a "positive phase" achieved.

It is obvious that the "auto-inoculator" has but one way of achieving his purpose, he can inoculate only *by increasing the blood-supply to the diseased focus*. But by doing so he also "irrigates," so that one act must serve these two purposes, though different considerations govern the indications for "irrigation" and "auto-inoculation." For "auto-inoculation" purposes the act should be *periodic*, to allow time for the formation of antibodies and to avoid negative phases, while for purposes of "irrigation" the more continuous the flow the better. A happy union of these two aims may best be achieved by a strong "auto-inoculation" at certain intervals, and a fair amount of "irrigation" (with, of course, some amount of unavoidable auto-inoculation) maintained between.

Auto-inoculation is open to one disadvantage of a more or less serious nature—namely, the fact that we must auto-inoculate into the blood stream instead of into the tissues. It is, of course, well known that toxin immunity (exemplified in the preparation of antitoxin) is better achieved by subcutaneous than by intravenous injections, and the evidence generally seems to show that the most active formation of bacterial antibodies takes place in the tissues. Bacterial products must necessarily be greatly diluted in the blood stream, and when they reach the tissues by this path are not so fitted to call forth a response as they would be if injected subcutaneously. Nevertheless, this apparent disadvantage accompanies all natural methods of cure, and by auto-inoculation we are but imitating Nature's mechanism. It may be that the tissues conjoining the diseased focus play a large part in this "antibody" formation, but, at any rate, we need hardly fear to follow Nature's lead.

It may be said that every method of treatment suffers certain disadvantages and limitations. Those of the artificial injection of vaccines may be briefly stated as follows:—1. The nature of the causative microbe may be impossible to determine; it may be out of reach and general opsonic tests may be doubtful or misleading. 2. The microbe, though its nature is determined, may be impossible to cultivate outside the body, as may happen in the case of certain strains of influenza bacillus. 3. Many microbes may be at work, and it may be doubtful how far each one is responsible. 4. There is, of necessity, a certain loss of time while the micro-organism is being found and a vaccine prepared.

The use of "auto-inoculation," on the other hand, suffers none of these disadvantages, but shows, to be sure, certain weak points of its own. The following may be cited:—

1. The dose given by auto-inoculation can never be so accurate as where subcutaneous injection is employed. Nevertheless, with a skilled appreciation of the nature of the infection and the response of the individual, the dose can usually be fairly accurately gauged, and readily confirmed by experiment. It may be remarked, in this connexion, that even to "direct" vaccination the dose is to a considerable extent experimental, both the toxicity of the particular strain of organism (which varies greatly) and the reactive power of the patient having to be taken into account.

2. The fact, already mentioned, that auto-inoculation occurs into the blood stream instead of into the tissues.

3. The possibility of doing harm: (*a*) Where in an organ like the kidney with a firm capsule "irrigation" is limited by space, and an increased blood-supply might lead to stasis with suppression of urine and death. (*b*) By the washing out of germs into the blood stream and so generalising a disease; this is seldom, perhaps, a serious consideration, except in the case of tuberculosis, where manipulation of an abdominal tuberculosis (never to be recommended) might lead to such a result. It is obvious that those dangers are not those of the method, but of its abuse in the hands of the careless or ignorant.

4. Localised disease may be so localised that insufficient auto-inoculation may be producible for its cure. Such localisation, on the other hand, may be a bar to successful treatment by the subcutaneous injection of vaccines also, unless special measures for increased irrigation are carried into effect.

It is obvious from a consideration of the weak points belonging to "direct vaccination" and "auto-inoculation" respectively that their provinces do not overlap, that each has its special field of operations, and that they are in a large measure complementary the one of the other. Where disease is mild and recent a control of natural methods should prove sufficient; where infective conditions are unduly prolonged artificial "irrigation" and "auto-inoculation" will cut them short. In chronic conditions, where the disease is within reach of the blood-supply, the same measures should be successful in many cases.

In certain conditions it is obvious that the "direct" injection of vaccines is best. In very localised lesions, boils, or tuberculosis of surface structures, it is readily and successfully employed. In chronic septicæmias it offers the only chance of success, since this must depend on getting the bacterial products into the tissues. In conditions between these extremes there remain many and various infections where auto-inoculation and direct vaccination must strive for the mastery, with some triumphs, I would predict, for the former in the hands of an ingenious "auto-inoculator."

I have pointed out in what manner the time-honoured medical treatment of certain infective diseases falls into line with modern conceptions of natural methods of cure. I now propose to consider what modifications and amplifications of such treatment our recent knowledge of vaccine-therapy suggests.

Bronchitis.—To turn once again to examples already given, we found that in bronchitis our attention has been directed too exclusively to "irrigation," and that even here

we have not always known when to stop. In acute and subacute infections of the bronchial mucous membrane "irrigation" is probably all we need consider, and the main point is to see that the flow of serum through the mucous membrane is continued long enough to destroy all the invading germs.

It is where bronchitis tends to become chronic or where repeated catarrhs occur that a conception of the principles of vaccine-therapy may enable us to add "auto-inoculation" to "irrigation" with a more reasonable expectation of success. In either case it appears that the invader has found a secure habitation in the mucous membrane, and the amount of exudation poured out (even where this is considerable) is only sufficient to hold him at bay. Now our means of getting rid of him are two-fold: (1) raising the protective power of the blood by auto-inoculation; and (2) by irrigating the focus in a thorough manner with this plasma of raised power. To auto-inoculate we must irrigate powerfully and that at suitable intervals. Since we do not know the micro-organism with which we are fighting, it behoves us to strike such intervals as are generally suitable, since the inoculation curve does not vary much in length where different organisms are concerned. Once a week where auto-inoculation is large, or twice a week where small, will probably be most suitable, and we may now consider the means at our disposal.

We appear to have at least three means of strongly "irrigating" the bronchial mucous membrane.

1. *By increasing negative pressure in the bronchi* during inspiration a passive congestion of the mucous membrane will be produced, and this may be brought about by the use of a Kuhne's mask or by inspiring rarefied air in the pneumatic cabinet. This may be applied once or twice weekly, but it must be remembered that the mucous membrane may be filled with blood, and yet secretion may be inadequate. For this reason depressant expectorants and perhaps alkalies should be pushed for an interval preceding this treatment, and also given in smaller doses between, to ensure sufficient irrigation in the intervals between each auto-inoculation. To relieve congestion remaining after use of the mask the circulation might be relieved by deep costal respirations. At the same time, counter-irritation of the chest wall and warm air will tend to relieve any passive congestion remaining.

2. *By the use of vapours which are irritant to the bronchial mucous membrane* and so tend to cause an increase of secretion through it. For this purpose creasote and the cresols contained in various preparations may be used, evaporated by heat in a small chamber in which the patient sits, the treatment being preceded with advantage by a short course of depressant expectorants. By this means a considerable temporary irrigation of the diseased area is accomplished, and leads to an auto-inoculation which, applied at the right intervals, should increase the antibodies in the patient's plasma. Here we have, perhaps, an explanation of the action of creasote vapour in bronchiectasis, and of the milder cresols in recurring catarrhs. Do not these act primarily as "irrigators" and "auto-inoculators," their antiseptic action, so greatly lauded, being of quite secondary and insignificant importance?

3. The third method of strong irrigation and auto-inoculation, applicable to bronchitis in children only, is by the weekly or bi-weekly exhibition of emetics till vomiting is produced.

When should we apply these means of auto-inoculation in bronchitis? In recurrent catarrhs they might be used at intervals between the attacks to raise the resistance and destroy the infecting organism. In chronic bronchitis or in bronchitis becoming chronic they should be used just as injections of vaccines are used, at suitable intervals till success is achieved or despaired of.

In cases of chronic bronchitis with freedom during the summer months an attempt might be made during this interval to dislodge the invader at the time when its hold on the mucous membrane was least secure.

Among the three methods here suggested for obtaining auto-inoculation in bronchitis my personal experience is confined to the use of the second only. Some practical success achieved by this means has encouraged me to add to the purely theoretical considerations of my paper these suggestions for their practical application to the treatment of this one variety of infective disease.

It will be readily perceived that the scope of the methods advocated is not bounded by the few examples for convenience considered here. To microbic infections of all regions the same rational means apply, though it is obvious that anatomical and other considerations must here and there change or modify their application. Thus in the kidney and in other organs invested with a fibrous capsule it is obvious that irrigation and its accompanying auto-inoculation can be of but limited extent, and an attempt to augment them beyond a certain point could only lead to stasis. Yet the theoretical considerations should not be disregarded, and even in kidney disease may lead us to new views. Thus, we shall be led to look upon albuminuria in cases of kidney infection (not, of course, in albuminuria of other causation), not as a mere loss of nutritives from the blood, but as the sign of a useful vital function—namely, the irrigation of the diseased focus with healing plasma. Thus (except so far as *plus* albumin implies *plus* infection) we can regard the quantity of albumin with equanimity, and see that its increase (perhaps under our own cautious manipulations) in cases subacute and tending to chronicity may be but a step on the road to cure rather than a sign of further tissue damage. If it were not for its capsule, we are tempted to feel, how much might be done for the kidney in conditions of infection! Such a thought necessarily brings the operation of "decapsulation" into our minds, and we are led to see that, at any rate in theory, this was a step in the right direction.

A glance round the field of medical treatment seems to reveal "irrigation" and "auto-inoculation" at the bottom of many successful empirical methods. The cold bath treatment of enteric fever so successfully employed in America, the use of ipecacuanha and of Epsom salts in dysentery, tar and other irritants in skin inflammations, emetics and purgatives in gastro-enteritis, abdominal massage in tubercular peritonitis—may not all these be claimed as instances of "irrigation" and resulting "auto-inoculation"? Lastly, might we not also improve on these methods, successful only in part, by a fuller recognition of this side of their action, and by directing our attention in future to the periodic spacing and control of that auto-inoculation we have for long unconsciously employed?

Queen Anne-street, W.

CEREBRAL TUMOUR AFFECTING THE UNDER SURFACE OF THE CORPUS CALLOSUM AND FILLING THE RIGHT VENTRICLE.

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THE following case is of interest, on account of the situation of the tumour, and of the great difficulty in localising lesions in the regions affected.

The patient, a man, aged 27 years, consulted me at the Manchester Royal Infirmary on account of "tremor, nervousness, and failing memory." His symptoms had been present for a few months. There had been no headache, no convulsions, no paresis of the limbs, and no disease of the ears. His previous health had been good. There was no history of syphilis, alcoholism, or injury to the head.

On examination, when first seen in May, 1910, there was nothing abnormal to be detected on the external surface. The hands and arms presented a fine tremor, somewhat resembling that of Graves' disease; it was noticed on movement of the arms, but it was not an "intention tremor" like that of disseminated sclerosis; it ceased when the hands were supported on any firm object, but it was well marked when the patient held out his arms and hands in front of him, in the extended position. The tremor did not affect chiefly the hand, as in paralysis agitans, but affected the whole arm, producing a fine movement. It differed also from the tremor of paralysis agitans by ceasing when the hands were supported on any firm object. There was also fine tremor of the tongue and of the lips and facial muscles, when the patient was speaking, or when he was asked to show the teeth. The voice was tremulous, but it had not the "scanning" characters of the speech of disseminated sclerosis, and it had not the slurring character of the speech of general paralysis

of the insane, though it resembled somewhat the speech of the latter disease. He complained of failure of memory, of nervousness, and of inability to do his work on account of his mental failure. But when tested he was able to answer questions quite well, to give dates, and make simple calculations without showing any indications of mental confusion. His friends had never noted any "grand ideas," or delusions, or other signs of insanity. He had slept badly for some weeks, but there had been no headache and no vomiting.

There was no paresis of the limbs, face, or tongue muscles. The knee-jerks were present, there was no ankle clonus, the plantar reflexes were present and of the normal flexor type (when the patient was first examined). There was no ataxia, no spastic gait, or other abnormality in the gait. There was no anæsthesia of any form, and no loss of the stereognostic sense; no affection of bladder, rectum, or vertebral column. Examination of the functions of the cranial nerves showed that there was no loss of smell; the pupils were equal and reacted to light and accommodation, and were quite circular in shape; there were no paresis of the ocular muscles and no nystagmus; the fifth, seventh, eighth, eleventh, and twelfth cranial nerves were not affected. There was no hemianopsia, and though vision was but little affected, ophthalmoscopic examination revealed marked double optic neuritis (with much swelling of the optic discs). The heart, lungs, abdominal organs, and urine were normal.

Until the optic discs were examined the diagnosis was indefinite, and the symptoms—tremor of lips, tongue, and facial muscles, tremor of the hands, tremulous speech, failing memory, and history of mental failure—suggested general paralysis of the insane. But the pupils were equal, quite circular in shape, and reacted normally to light and accommodation; and the speech, though tremulous, had not quite the characters of the speech of general paralysis; the mental changes appeared to be simply those of mental failure; and there was no evidence of previous syphilitic infection. On ophthalmoscopic examination one was surprised to find marked double optic neuritis. This and the history of the case suggested intracranial tumour. But there had been no headache and no vomiting. The localisation of the growth was not evident, but a lesion of the frontal region appeared probable at that time.

The man was admitted as an in-patient, under my care, at the Manchester Royal Infirmary on June 4th. His condition was then much the same as on the first examination; but soon afterwards it was found that there was a well-marked Babinski (extensor type) plantar reflex on *each* side, and also a marked Oppenheim reflex on *each* side (extension of the big toe on stroking firmly the inner side of the leg, along the posterior border of the inner surface of the tibia). No true ankle clonus could be obtained. Both knee-jerks were present. There was no paresis of the legs, and no rigidity of the limbs to passive movements. The abdominal and epigastric reflexes were present, and better marked on the right side than on the left. There was no anæsthesia. No affection of the ocular muscles could be detected. On showing the teeth the left angle of the mouth was not retracted quite so much as the right, but the difference was slight.

The optic neuritis was more marked than on the first examination. The temperature was normal; the pulse was slow (60), but regular.

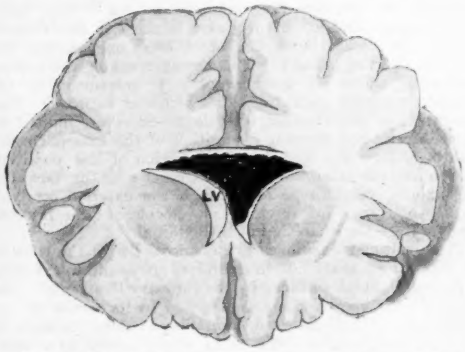
The patient remained very quiet in bed and took little interest in his surroundings. There was no headache at first, but a few days after admission he vomited several times and complained of severe headache. He became drowsy, but when roused could answer questions quite intelligently and could perform all the movements of the limbs which were requested. The drowsiness steadily increased, and for some days he was in a semi-comatose state. Finally, he became quite comatose, and death occurred three weeks after admission.

During the time the patient was in the hospital no paresis of the limbs or ocular muscles developed, and there was only the slight doubtful paresis of the lower part of the left side of the face. The Babinski and Oppenheim reflexes remained well marked on each side, but ankle clonus never developed.

Necropsy (*head only*).—No changes of importance were found on the external surface of the brain, except that the floor of the third ventricle formed a cyst-like projection at the base of the brain. The cerebellum, pons, and medulla were normal. The fourth ventricle was not distended.

On section of the cerebrum a large median tumour was found immediately under the corpus callosum. The growth was dark greyish-red in colour and very soft and vascular. It had invaded almost the whole of the under surface of the corpus callosum, from the anterior to the posterior part, and from side to side. The upper surface of the corpus callosum appeared normal. On section the fibres of the corpus callosum were seen to form simply a thin layer of white matter just above the tumour. The left lateral ventricle was dilated and contained a considerable amount of serous fluid, but the tumour did not invade the left ventricle. The right lateral ventricle was filled with the tumour growth from the anterior to the posterior part, but the outer wall of the ventricle was not invaded by the growth. The white matter of the cerebral hemispheres, the basal ganglia, and the cerebral cortex were not invaded by the tumour. The third ventricle was dilated and contained serous fluid.

The exact starting point of the growth could not be determined, but it appeared to have commenced in the middle line just under the corpus callosum, probably in the velum interpositum. The tumour affected all the structures in the middle line between the corpus callosum and the basal ganglia; it invaded the lower layer of fibres of the corpus callosum, and it filled the right lateral ventricle but did not invade the left ventricle. (See figure.) The tumour was a vascular, round-celled sarcoma.



Vertical transverse section of brain through anterior part of lateral ventricles. LV=left ventricle. Tumour, deep black.

The diagnosis of tumours in the region of the corpus callosum and lateral ventricles is very difficult and often impossible, and I do not propose to analyse the records previously published in medical literature. I wish simply to report the facts of my case.

The chief clinical features of the case were the following. 1. The fine tremor of the lips, tongue, facial muscles, and of the hands and arms; the tremulous speech and mental impairment; symptoms suggesting general paralysis, but differing in the points already mentioned. 2. The absence of headache and vomiting until the termination of the disease (last two weeks of life). 3. The marked double optic neuritis. 4. The well-marked Babinski and Oppenheim reflexes on *both* sides, without ankle clonus or definite paresis of the limbs.

The presence of the well-marked Babinski and Oppenheim reflexes on *both* sides suggested a median intracranial lesion, and did rouse at one time the suspicion of tumour of the corpus callosum; but it was not felt that this localisation could be made with certainty from the symptoms. I think it probable that in cases of intracranial tumour the presence of *bilateral* Babinski or Oppenheim reflexes, without ankle clonus or paresis of the limbs, will be found to be a useful indication of a median position of the tumour growth.

The accompanying figure represents a vertical transverse section of the cerebrum through the anterior part of the lateral ventricles and corpus callosum. In sections made posteriorly the growth was much larger.

Manchester.

THE Philosophic Faculty of the University of Marburg has conferred the degree of Doctor (*honoris causâ*) upon Mr. Ernst Leitz of Wetzlar, principal of the firm of E. Leitz, manufacturers of microscopes, microtomes, and photographic lenses.

SUBLUXATION OF THE KNEE.

BY J. J. W. EVANS, F.R.C.S. ENG.,
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I DESIRE to report two cases of the above injury partly to discuss some points in the established treatment which seem to me illogical, and partly to record an interesting complication of treatment. I shall deal with that form of subluxation of the knee which is associated with injury to the semilunar inter-articular fibro-cartilages. The most common lesion is a detachment of the anterior end of the internal semilunar cartilage. The external cartilage is very rarely injured, and when injury occurs it is usually a transverse splitting of the cartilage. The damage is almost always done by a sudden rotatory movement with the joint in the flexed position.

In studying this condition it will be well to notice certain points in connexion with the structural peculiarities and movements of the joint which are of vast importance in controlling the nature of the injury and clinical signs produced. The main strength of the joint lies, not in its capsule, but in the reinforcement of the capsule by the tendons of muscles surrounding it—e.g., the semimembranosus and popliteus; also in the site and disposition of the crucial ligaments, which cross one another like the limbs of the letter x. This arrangement of the crucial ligaments allows of gliding rotatory movement of the femoral condyles upon the tibial articular surfaces. This movement of the external condyle is, however, limited by the small size and circular disposition of the external semilunar cartilage and also by the insertion of the popliteus tendon into the external condyle, together with the fact that the axis of rotation passes through the external condyle. Thus, the range of rotatory movement of the internal condyle is greater than that of the external.

The semilunar cartilages are connected with the tibia in the following manner. Both cartilages are bound to the tibia at their peripheral surfaces by the coronary ligaments. The external semilunar cartilage is attached by its cornua to the rough surfaces immediately in front of and behind the spine of the tibia, the posterior cornu being strengthened by a band from the posterior crucial ligament. The internal cartilage has its cornua much more widely separated; the posterior horn is attached to the tibia just behind that of the external cartilage and is to some extent held in position by the posterior crucial ligament; the anterior horn is weakly attached to the front of the upper surface of the tibia and is connected to the external semilunar cartilage by a band called the transverse ligament.

Seeing the greater mobility of the internal femoral condyle and the weak attachment of the anterior limb of the internal semilunar cartilage, one can easily explain the great frequency with which the said limb is injured. Situated beneath the fold of synovial membrane which sweeps from the surface of the joint capsule backwards to the crucial ligaments is a pad of fat the function of which is to sink backwards and fill the space formed between the articular surfaces during flexion. Now the lateral extensions of this synovial fold are attached to the anterior extremities of the semilunar cartilages, so that when the anterior part of the internal cartilage is detached from the bone it sinks between the opposing bony surfaces during flexion of the joint, and becomes nipped between them during extension. The above explains the locking which so frequently occurs during this accident.

The movements occurring at the knee are two: (1) The hinge action of flexion and extension; and (2) a combination of rotation and gliding, most marked in the internal subdivision of the joint and occurring only during flexion of the articulation. The "screw-home" action of the joint consists of external rotation of the tibia upon the femur as the first part of the action of flexion, and internal rotation of the tibia as the last part of the act of extension. This enables one to stand upright without using the thigh muscles. During full extension there is no lateral movement in the normal knee-joint; but when the semilunar cartilage is injured lateral movement can be obtained towards the injured side due to removal of the lateral support of the structure.

The clinical signs of cartilage displacement are: (*a*) Pain associated with locking of the joint due to nipping of the displaced cartilage between the femur and tibia when extension is attempted. The pain, which is severe, is due to stretching of the ligaments. (*b*) Synovial effusion, often blood-stained in the first attack, follows the locking and is due to traumatic synovitis. (*c*) In some cases the cartilage may be felt displaced forwards to the inner side of the patella; more frequently a tender spot marks the position of the injury. (*d*) Lateral mobility is possible with the joint in the position of full extension. (*e*) There are usually some muscular wasting and flaccidity of the thigh on the affected side.

The conservative treatment of this injury consists in fixation of the joint in the extended position for a period of about six weeks after replacing the cartilage; this is followed by application of an apparatus of one of two kinds.

1. One consists of lateral irons allowing of hinge action at the level of the joint and fixed to the limb above and below by bands encircling the part. This is applied in the hope of preventing the rotatory movements which cause the injury and displacement of the cartilage. The lower band fixes well upon the leg below the tubercle of the tibia. The upper band is applied to the thigh about three inches above the level of the joint, at which site the femoral shaft is practically cylindrical and has a thick covering of soft structures which, together with the fact that the skin is freely moveable upon the subjacent fatty tissues, I am assured render all hope of preventing rotatory movements (which have been shown to be normal and necessary) absurd.

The following are the measurements of soft structures covering the femoral shaft three inches above the joint in six cases taken consecutively on the post-mortem table:—

Sex.	Anteriorly.	Internally.	Externally.	Posteriorly.
F.	¾ inch.	1 inch.	1 inch.	1½ inch.
F.	⅞ "	1¾ "	1¾ "	2¼ "
M.	¾ "	1¼ "	⅞ "	2¼ "
M.	¾ "	⅞ "	⅞ "	2¼ "
M.	⅝ "	¾ "	⅞ "	1¾ "
F.	⅝ "	⅝ "	¾ "	1¾ "

2. The second apparatus is a truss or clip arranged to keep pressure over the site of the anterior end of the internal semilunar cartilage; as I have shown, locking occurs when the cartilage is dragged in by the synovial membrane between the opposed articular surfaces, so that I fail to see what can be gained by applying an apparatus, the aim and object of which are apparently to displace the cartilage backwards and so ensure frequent attacks.

Treatment is then reduced to: (*a*) Fixation of the joint immediately after the injury for about six weeks in the extended position. (*b*) If the above measure fails there remains only the radical method of excising the injured portion of the cartilage. This course is open to the danger of septic infection at the operation; and this is a very real danger, as the synovial membrane of the knee is so complicated, and the joint is usually in the state of traumatic synovitis at the time of operation. These perils should make one especially careful of one's asepsis.

CASE 1.—A woman, aged 23 years. Three years before admission to the hospital the patient was on a step-ladder and in turning to come down the knee became locked; this was followed by swelling. She had a similar attack six weeks before admission. On examination the internal cartilage could be felt displaced forwards and was tender. At the operation the anterior part of the internal semilunar cartilage was found to be torn from its attachment and was removed. Reactionary hæmorrhage occurred into the joint, and on the eighth day the joint was reopened and drained. The patient was discharged from hospital six weeks after operation with good movement. I would account for the small number of attacks in this case by the fact of the cartilage being displaced forwards. The hæmarthrosis which occurred appears not to be a very dangerous complication if promptly treated by irrigation.

CASE 2.—A man, aged 42 years. Five years before admission whilst walking he slipped on a piece of orange-peel and fell; on attempting to rise he found that his right knee was acutely painful and fixed in the semiflexed position. On manipulation "something clicked in the joint," and he was immediately able to use it. The joint remained swollen and slightly painful for ten days. Since that time the patient had had 60 or 70 attacks similar to the first. On examination the muscles around the joint were slightly wasted, and there was a small amount of fluid in the joint; no displaced cartilage could be felt, and there was marked lateral movement in extension. At the operation the internal cartilage was found to be split and detached anteriorly; it was removed. The patient was discharged with perfect movement on the eighteenth day.

I am indebted to the kindness of Mr. W. G. Spencer and Mr. J. M. G. Swainson for permission to publish these cases.

Westminster Hospital.

ATONIC DILATATION OF THE STOMACH.

BY PERCY A. MITCHELL, M.B., CH.B.,
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THE following clinical work, commenced six years ago and embodying a new method of treatment, has yielded results which, I believe, will prove of interest to the profession.

Atonic dilatation is a condition of the stomach in which there are enfeeblement of its muscular coats and impairment or loss of its motor power, with great enlargement of the organ.

1. *Etiology.*—The most common cause is over-feeding, either a persistent overloading of the stomach, constantly overtaxing its capacity, or the taking of food too frequently, so that a fresh meal is introduced into the stomach before the previous one has had time to leave it. Insufficient mastication and the bolting of lumps of food are also causes, the pylorus closing to prevent the passage of lumps out of the stomach.

2. *Pyloric spasm of reflex origin.*—Under this heading are included the cases in which the primary cause is found not to be located in the stomach, and the atonic condition has yielded to the treatment only after this cause has been eliminated. It should be noted, however, that once atonic dilatation has become completely established, the removal of the primary cause is not always followed by the restoration of the lost motor power of the stomach without special treatment directed to that organ.

(*a*) Appendicitis. Even in the mildest attacks this may produce pyloric spasm, retention, and impairment of the motor power; and, in fact, it is frequently a history of "dyspepsia" extending over a long period that leads to the discovery of the disease in the appendix.

(*b*) Renal calculi, uterine and ovarian irritation (the frequent association of gastric stasis with erosion of the os uteri may be pointed out), and gall-stones may all produce reflex pyloric spasm, as also phimosis in children.

3. Overwork, worry, irregular hours, lack of exercise, and gastric catarrh from the eating of unsuitable or improperly prepared food, are frequent causes.

Course of the Disease.

The disease usually follows a well-defined course; and the sequence of events, although each stage merges gradually into the other, may for convenience of description be divided into the following stages: (1) Gastric stasis; (2) chronic distension; (3) muco-gastritis; and (4) atonic dilatation.

1. *Stasis* is a retention in the stomach of the products of digestion for an abnormal length of time. It is characterised by a feeling of discomfort, heart-burn, acid eructations, and flatulence. By the method of auscultatory percussion which is described later, and by which greatly increased accuracy can be obtained, the stomach is found to be slightly distended, and a splash can be heard. If six hours after a meal the stomach is distended and a splash obtained, it can be said that there is a state of gastric stasis.

The delay in the emptying of the stomach contents into the duodenum leads to acid fermentation of the retained material, with the evolution of considerable quantities of gas, and this being often repeated a state of chronic distension is reached.

2. *Chronic distension* is a condition in which the stomach is found always distended; temporary distension occurs even in the earliest state of stasis. A sharp line of distinction must be drawn between chronic distension and dilatation. In distension there is an enlargement of the stomach by fluid and gas, but when completely emptied the organ returns to its normal size. In dilatation, even when completely emptied, the stomach does not return to its normal size.

The symptoms of chronic distension are those of stasis, but greatly increased in severity; there are heart-burn, very acid eructations, nausea, great flatulence, palpitation of the heart, and considerable pain in the epigastrium, relieved by pressure or the passage of the gas out of the stomach.

The stomach resonance is greatly increased, extending high up in the axillary line and as far down as the umbilicus. It can be taken as a very useful rule that, when the resonance is greatly increased in an upward direction without a very great increase in a downward direction, the condition is one of distension rather than dilatation; whereas if the signs all point to the stomach being very low in the abdomen, and if in the recumbent attitude the resonance extends far below the umbilicus, it is probably a case of dilatation rather than distension. In chronic distension a distinct splash can always be obtained.

The disease may now follow one of two lines: the over-distension may produce an atonic condition of the muscular coats and dilatation become established, or this last stage may be reached after the stage of muco-gastritis. It is important to realise that atonic dilatation may become established, and the motor power of the stomach enfeebled or lost, without any acute symptoms ever having been felt by the patient, the history of "dyspepsia" extending over a long period being all that can be elicited.

3. *Muco-gastritis* is an inflammation of the mucous coat of the stomach, the result of chronic irritation by the highly acid products of fermentation in fluid retained in the stomach. The acids produced are butyric, lactic, and acetic.

The pathology of this condition is interesting, in that it has a great deal to do with the subsequent history of the case. The mucous membrane is inflamed, and the summits of the folds show minute excoriations or pin-head superficial ulcers; these are scattered about in great numbers, particularly in the pyloric antrum and on the gastric side of the pylorus itself. Several of these little ulcers may coalesce and produce a large superficial ulcer called a "gastric erosion." This does not extend below the mucous coat, having the submucous coat as its floor, and it is thus distinguished from the real gastric ulcer, which involves all the coats of the stomach.

In a more chronic condition the mucous membrane becomes greatly thickened in patches, particularly close to the pylorus. These thickened areas are denuded of epithelium and look very like granulating surfaces. This condition might be called the "granular erosion" for the sake of distinction. These areas, situated close to the pylorus, may be so prominent as to be an actual obstruction to the passage of fluid from the stomach.

It is a law that ulcerated surfaces do not heal unless kept in a state of physiological rest, and in a moveable contractile organ like the stomach it is particularly difficult to secure this and very essential that the rest should be absolute. Now in the fundus of the stomach at this stage is a highly acid irritating mixture, and as this is forced up to the raw eroded surfaces of the pyloric antrum a spasm is produced, the antrum and pylorus contract, and the fluid is prevented from passing out, only to return to the fundus and undergo still further fermentation. It is clear that an eroded mucous surface, constantly subjected to this irritating fluid and to these spasmodic contractions, gets very little chance to heal. Physiological rest of the stomach can only be secured by ridding it of this irritating mixture and allowing the organ to remain free of all food for a time.

The characteristic signs of this stage are great pain and a localised tender spot in the epigastrium obtained by gentle but deep pressure. Vomiting is not a usual symptom, but in many cases the pain becomes very acute and boring in character towards the early hours of the morning, and this is only relieved by vomiting. During the day-time the taking of food may relieve the pain for a short time, due partly to the alkaline saliva neutralising somewhat the acids in the stomach, and it is interesting to note that the secretion of saliva is often greatly increased in this affection. The gastric mucous membrane also secretes large quantities of a clear, very tenacious, mucus, which forms a layer covering the mucous membrane. It is alkaline when secreted and serves as a protecting layer, preventing the delicate glandular structures from being destroyed by the acid contents of the stomach.

When the whole mucous membrane is in a state of chronic catarrh, there comes a time when no free hydrochloric acid is found in the contents, only butyric, lactic, and acetic acids being present. The pyloric glands do not secrete hydrochloric acid, and as it is the hydrochloric acid that has the power of destroying micro-organisms, swallowed either from septic conditions in the teeth and gums or in the food, the pyloric antrum, with its already eroded and granular patches, is left very vulnerable to attacks of septic germs, which find an entry into the underlying tissues, and may thus produce an actual "gastric ulcer." It is certain that this condition of inflamed mucous membrane with gastric

erosion is more common in patients with septic teeth and gums (pyorrhœa alveolaris).

The tongue is furred, with two brown streaks running parallel to the middle line. In two instances I have seen the tongue absolutely black, as if coated with ink.

There is sometimes hæmorrhage in this condition, and the fæces may be black. Probably the hæmorrhage is mostly of an oozing character from the raw surfaces. It is sufficient, however, frequently to raise the question as to whether the case is one of duodenal ulcer: both conditions have a localised tender spot and melæna, with at the same time an absence of the hæmatemesis and vomiting so characteristic of real gastric ulcer. The following point will frequently succeed in clearing up the diagnosis. Mark on the skin with a blue pencil the exact locality of the tender spot, then proceed to empty the stomach of its contained gas by the method described later, and it will be found that the tender spot is one or two inches or more higher up. This "moveable tender spot" is very characteristic of gastric erosion, the tender spot of duodenal ulcer being fixed. This difficulty only arises where the tender spot is low and about the middle line. If the spot is high up, close to the sternum, it is unlikely to be a duodenal ulcer.

The bowels are always obstinately constipated, and the patient loses flesh rapidly, looks sallow and ill, and is unable to sleep on account of the boring pain.

4. *Dilatation.*—An enlargement of the stomach varying within wide limits and from day to day, without the organ at any time returning to its normal size. There are two distinct types—hypertrophic and atonic.

Hypertrophic dilatation is an enlargement of the stomach, with great increase in the strength of the muscular coats and motor power. It is the result of an obstruction to the outlet, and is a true compensatory hypertrophy to overcome the obstruction. Eventually, as gastritis is produced by the retained fluids, a state of atony results.

Atonic dilatation has been already defined, the chief point being an enfeebled muscular coat and impairment of the motor power. It is atonic dilatation only that is dealt with in this article, the hypertrophic type coming within the scope of the surgeon.

The symptoms of atonic dilatation are:—1. Great enlargement of the stomach, its upper limit being frequently high up in the axillary line (increased area of stomach resonance), and its lower limit frequently reaching as far as the symphysis pubis. 2. Succussion; the splash can be obtained at any time. 3. Sense of distension and weight, a dragging feeling due to stretching of the peritoneum, which actually assumes the rôle of "suspensory ligaments." 4. Vomiting of large quantities of fluid of an intensely acid character, which is highly irritating to the œsophagus, pharynx, and nasal passages. 5. If there are any of the patches called "granular erosions" there is great tenderness on pressure. 6. These symptoms are liable to frequent exacerbations particularly if there is over-distension with gas, and during these paroxysms the patient may roll on the floor in agony.

Atonic dilatation may be arrived at as a gradual process with only the mild symptoms of gastric stasis, without the stages of muco-gastritis and erosion, and the patient may state that he has never suffered from anything but "indigestion." There is always some degree of inflammation of the mucous membrane. Stasis leads to a disorganisation of the gastric glands. According to the laws of secretion discovered by Pawlow, the glands in a normal stomach secrete juice of a quality and quantity exactly required for the digestion of the articles of food introduced into the stomach. Now it is obvious that if, in a stomach already containing the products of digestion plus the products of acid fermentation, there is added still a further supply of food, the gastric glands are thrown out of order. The condition in a dilated stomach, with the contents retained for, it may be, days, and the mucous membrane covered with a layer of tenacious mucus, is as far removed from normal as can be imagined; nor is it to be improved by the addition of drugs and chemicals unless some outlet can be found for the products of their action.

Obstinate constipation is an almost constant accompaniment of the condition in all its stages, from the early stasis to the advanced dilatation, and in its late stages the disease gives rise to all the general constitutional conditions associated with toxic absorption from the gastro-intestinal canal. The author is impressed by the fact that these auto-intoxications are far more frequently gastric in origin than intestinal.

Treatment.

This brief sketch of the origin and development of atonic dilatation will serve to make clear the various points in the method of treatment now to be described.

The usual treatment adopted in these cases is diet, alkalies, antiseptics and antiferments (carbolic acid, creasote, &c.), and in later stages lavage of the stomach with warm antiseptic fluids by means of the stomach tube. To the tube there are great objections, and in many cases it is impossible to use it. Moreover, although it frees the stomach of its contents and palliates the condition it does nothing to restore the impaired motor function, nor to re-educate the stomach to work automatically. Gastro-enterostomy gives only partial relief, for in these cases there is no actual obstruction at the pylorus, and consequently the stomach very soon becomes dilated again. The radical cure is to restore the motor function of the stomach and to re-educate it to perform its work automatically as it does under normal conditions.

The instrument essential for the carrying out of the treatment is a modification of the phonendoscope. It is a large, fairly heavy instrument (not less than 8 ounces) called Bazzi et Bianchi's, and when placed on the abdomen (the patient recumbent) leaves both hands of the operator free.

Auscultatory percussion.—Let the patient lie flat on his back, with the head well down, and place the phonendoscope on the epigastrium, where its weight holds it in position; introduce the two ear-pieces into the ears and proceed to percuss out the stomach, liver, colon, intestines, &c. It will be found that by this method the organ can be mapped out with the greatest accuracy, and less difficulty will be experienced in distinguishing the stomach from a dilated colon or small intestine. Without the instrument it is often impossible to differentiate a dilated colon from the stomach.

The slightest degree of splash, inaudible without the instrument, can now be detected. Grasp the patient firmly by both hands, steady the instrument with the tips of the thumbs, and sharply shake. The splash is quite clear. Another method is, with the instrument in the same position, with the right hand sharply press under the margin of the ribs when a splash is easily obtained. By means of this instrument certain definite sounds can be heard, and it is essential that the physician should train himself to differentiate these and learn their significance:—"Pistol-shot sound": small successive quantities of gas passing through the pylorus. "Explosion sound": large quantities of gas passing through the pylorus. "Sizzling sound": small quantities of fluid passing through the pylorus. "Gushing sound": larger quantities of fluid passing the pylorus. "Debacle": a long-continued rush of fluid occurring towards the end of the treatment, when the stomach completely empties itself into the duodenum. "Waves": (*a*) A low "crunching sound" resembling that made by a man walking on frozen snow, due probably to the churning movements of the antrum. (*b*) A soft "sighing sound," which is only got in an empty stomach across which peristaltic waves are passing. These are not obtained except at the very end of a treatment.

The point on which the whole treatment turns is the discovery of a series of superficial skin areas, the gentle stimulation of which causes contraction of the distended stomach, the opening of the pylorus, and consequent emptying of the contents into the duodenum. It is a pure reflex action. The areas lie along the margin of the ribs, commencing at the tip of the tenth costal cartilage on the left side, ascending to the tip of the sternum and down the costal margin on the right side.

The manipulation is carried out as follows. With the patient flat on his back, place the phonendoscope on the right of the umbilicus and seat yourself on his right side facing his head. Place your right hand on the patient's abdomen with the tips of the fingers at the costal margin, find the tip of the tenth rib, and with the tips of the first, second, and third fingers very gently glide, with a trembling motion, over the skin. A hard tap produces a spasm of the pylorus, and all attempts to empty the stomach are futile for some time. It is the delicate, light touch which is efficacious. After a few seconds or minutes (it varies), action will be heard beginning in the stomach. The first to

leave is always gas; consequently "pistol-shot" or "explosion sounds," according to the quantity escaping at one time, will be heard. Cease the stimulation until that contraction has stopped, then proceed again in the same manner, and all the gas will thus be driven out. Then quite different sounds can be heard: a low, muttering, crunching sound begins; it increases in intensity as it approaches the pylorus, and, this opening, a sizzling or rushing sound of fluid is heard. These waves succeed one another until the stomach is quite empty, and when there is nothing more left the soft blowing sighing sound can be heard as wave after wave travels across the empty stomach.

These sounds are greatly modified by the various conditions in the diseased stomach. In a simple case of gastric stasis, without inflammation or erosion, the above sequence of events can be obtained fairly easily about six hours after a meal. In "distension" the sound of the escaping gas is one of the most remarkable phenomena of auscultation, and is followed by rush succeeding rush of fluid, and "debacle" is frequently obtained.

In gastritis with excoriation or erosion the gas escapes fairly well, but the sound as the highly acid fluid reaches the raw spot in the mucous membrane is quite characteristic. The wave commences with the low crunching sound and works up to the point where you momentarily expect to hear the rush of fluid, when it suddenly stops short. There are two elements that cause this sudden stoppage of the wave. A peristaltic wave cannot pass over an eroded area. This is what we find in other parts of the body; a small erosion in the knee causes the joint to be held quite rigid by the muscles, and the same protective mechanism would appear to apply in the stomach; the muscular coats hold rigid where the mucous membrane is eroded. The second element is the spasmodic contraction brought about by the highly acid nature of the fluid.

In "atonic dilatation" it is more difficult and takes longer to start the contractions, but once started they continue very well. There is always in this condition a great deal of gas in the stomach, and before the fluid can pass the pylorus this gas must be expelled. Owing to the weakness of the muscular coats there is very little strength in the contraction, and very frequently the sound heard is a characteristic one; it suggests a "ball-valve," the accumulation of gas in the pyloric antrum moving up to the pylorus, but not escaping, and making a curious metallic snap as it is forced against the closed pylorus. When, as is always the case after a little time, the gas escapes through the pylorus, it does so with a very loud report, and is followed by a rush of fluid.

In a case of atonic dilatation the treatment for the restoration of the motor function of the stomach is carried out as follows. About five hours after a meal, say at six in the afternoon, the treatment as described above is performed. At the first treatment great patience is required, and usually half an hour or more is necessary to completely empty the stomach. This routine is carried out daily, and at the end of two or three weeks the actual symptoms and signs of dilatation have subsided. It is necessary to continue the daily treatment until at six in the afternoon, after an ordinary luncheon, there is no sign of splash, distension, or retention of food; in other words, the stomach carries out its motor function without any external aid. It is necessary, in order to prevent a relapse, that the treatment be continued daily until the sounds heard are normal—viz., smooth, regular, intermittent waves, and the passage of fluid through the pylorus at every second or third wave. If there is a great deal of gas, or if the waves are broken, irregular, and choppy, then the stomach is still abnormal, although the patient may feel perfectly well.

This disease in all its stages is accompanied by obstinate constipation, and it is one of the most gratifying features of this treatment that at the end of the first week, often earlier, without drugs, the bowels begin to move regularly each morning and continue to do so. I have not yet had a case in which this has not occurred.

Certain points in the treatment are of importance. Once a wave is heard to commence the stimulation should be stopped until that wave has ceased. If further stimulation is commenced before the previous wave is completed a spasm of the pylorus is apt to occur. The treatment should not be commenced until at least four hours have elapsed since a meal, and in the graver cases an even longer time. If a case is a particularly obstinate one, it is better not to try to force it, but to leave the stomach perfectly quiet for an hour, and then recommence the treatment.

The contractions produced by this method are often very powerful, and it is of the utmost importance that this treatment should not be used when a real "gastric ulcer" is present. This ulcer involves all the coats of the stomach, and a very powerful contraction might produce either perforation or violent hæmorrhage.

Special Points in Diagnosis.

It is frequently of the greatest importance to be able to decide whether a dilated stomach is due to an obstruction to the outlet or to an atonic condition of the organ itself. In view of the fact that the operation of gastro-enterostomy is successful in the former condition and so frequently fails in the latter, it would be of great benefit to the surgeon to know if there is an actual stricture of the pylorus, and by the method described the question can often be settled. If, on producing contractions of the stomach, fluid is heard to pass freely, there is certainly no great obstruction to its flow, and by practising this method for a few days, and noting the result, both in the size of the stomach and the passage of its contents, an accurate prognosis might be made as to the benefit, or the reverse, that might be derived from a gastro-enterostomy. If, on the contrary, fluid can only be made to pass the pylorus in irregular little jets, the sound of which is quite characteristic, and if, as occasionally occurs, the contractions produced are so powerful that the contents, unable to pass out by the pylorus, are ejected forcibly through the mouth, then an actual diagnosis of pyloric obstruction could be made. There is, however, a condition of the mucous coat near the pylorus in which the mucous membrane is greatly thickened and the surface eroded (the granular erosion), in which the signs very closely resemble those of an actual stricture; and particularly in this condition, when the acid contents reach these areas, the pylorus contracts spasmodically. A week's observation will usually serve to clear up the difficulty.

Cases.

CASE 1.—A man, aged 29, with history of stomach trouble extending over a period of six years. This patient came to me on Oct. 23rd, 1909. The stomach reached to the symphysis pubis; all the signs of dilatation were present. His weight was 6 st. 9 lb. The urine passed was very scanty in amount, and the bowels were obstinately constipated, often acting only once in the week. He was liable to violent attacks of pain lasting for many hours, in which he would roll on the floor in agony. With the first treatment a considerable amount of gas and fluid passed through the pylorus. It was considered advisable, however, not to attempt to send any more of the stomach contents into the intestine, and nine pints were removed by the stomach tube.

Oct. 24th: Several "debacles"; 5 pints removed by tube. 25th: Great quantity passed by pylorus, 2 pints by tube. Urine increased in amount. 26th: 2 pints by tube; fluid passed freely by pylorus. 27th: Fluid passing freely by pylorus; no result by tube; urine increased. 28th and 29th: Stomach emptied through pylorus; bowels opened naturally without drugs.

Through November, December, and January the treatment was continued daily. The stomach gradually returned to its normal position, the bowels acted every day, the urine was normal in amount, and the patient increased in weight to 9 st. 10 lb. He has remained well without any symptoms since that date, and three weeks ago he reported himself as perfectly well, able to conduct his business, and weighing 10 st. 11 lb.

This patient had had treatment by lavage of the stomach with the tube at many periods during the previous few years with only partial relief, relapses occurring almost immediately.

CASE 2.—This case—a female, aged 35—presents many features of interest on account of the conditions which complicated the dilatation of the stomach. She had been perfectly healthy, accustomed to riding and all outdoor exercises, until four years previously. There was a history of continuous stomach trouble since that date.

On examination the stomach was found to be enormously dilated, reaching to the symphysis pubis. The right kidney was easily felt on palpation, and the uterus was almost presenting at the vulva. A condition of "neurasthenia" was particularly marked: violent crying fits, palpitation of the heart, sleeplessness, migraine, and a feeling described "as if the top of her head was made of cotton wool." The patient was wasted and very weak. Constipation was most obstinate, and a tablespoonful of the liquid extract of cascara sagrada was taken every night with but little result.

She had frequent attacks as follows. Commencing the day following recovery from the previous attack, she would have pain and uneasiness after luncheon, aggravated by dinner, and ending in a restless night. This became worse next day, and by the evening she would have a violent headache and suffer great pain in the abdomen, and vomit. The next day or two would be spent in bed and no food taken. This would relieve her partially, only, however, to be followed by a similar attack as soon as she got up and resumed taking meals.

The treatment was commenced and continued daily for three months uninterruptedly; no stomach tube was employed and all drugs stopped; an enema was administered each morning during the first ten days. The contents of the stomach passed the pylorus at first with considerable difficulty and in small quantities, but daily the stomach assumed a higher position in the abdomen, and at the end of the first month its lower limit was on a level with the umbilicus. After the

tenth day from the commencement of the treatment the bowels acted without an enema and continued regular.

It took nearly a year to complete the cure, and at the end of that time she had gained 2 stones in weight, had no signs or symptoms of stomach trouble, all "nervous" symptoms had disappeared, and the kidney could not only not be felt, but gave none of the symptoms associated with moveable kidney. The uterus also, relieved of the pressure from above, came to occupy a position more near to the normal. She is now, four years after the treatment commenced, quite well, able to ride and play tennis and golf, and shows no signs of a relapse.

CASE 3.—This case is quoted on account of the rapidity with which the stomach regained its normal position and power, and also to illustrate in what an insidious manner such a serious condition can be arrived at. As the patient is a final year medical student he has himself written the history.

"I was up at Cambridge from 1905 to 1908, and periodically used to have to train for the races, which training chiefly consisted in taking hard exercises, running and rowing, and eating enormous meals with the object of sending my weight up. When training I used to eat enormously, whether I was really hungry or not, as I was exceptionally light and fondly imagined I was doing myself good. This did not trouble me particularly until my last term, June, 1908, when I occasionally suffered from severe griping pain in the epigastrium. That was all I complained of at the time, but about six months after, during which I had not been leading a very hygienic life, either as regards food or exercise, I began to feel a sense of distension and discomfort in the epigastrium after meals, which gradually passed off into hunger pains before meals, for which I used to eat, not because I felt hungry, but to allay the pain, which, however, was never at all severe.

This went on for about two years, during which time I used to complain a lot of epigastric discomfort, absence of appetite, wind, occasional feeling of sickness, and general languor. I used to play games, tennis, golf, and Rugby football, but never felt very grand after playing them, and was stopped playing the last named for a short time last winter because I was anæmic and on examination had a hæmic murmur. These, however, cleared off when I was treated.

During these two years my weight, which was never anything very great, dropped about a stone, from 10 st. 6 lb. to 9 st. 6 lb. approximately, but what worried me most was that I sometimes used to feel faint in the wards, and did actually faint on two or three occasions. This liability to faintness and feeling of discomfort and distress in the epigastrium, which it is beyond me to describe, was really what chiefly worried me. Another thing was that I suffered a good deal from sleeplessness; going to bed after midnight, after working, I often lay awake for an hour or so, and on more than one occasion for two or three hours, on account of the epigastric sensations.

I frequently used to try and diagnose my condition, and on examining the abdomen I was often struck with the fact that in pressing out the abdomen, or breathing rapidly in and out, I had a fairly extensive succussion splash, the epigastrium, and even below the umbilicus, feeling like a bag of water swaying about under the fingers."

On examination the stomach was found occupying the whole left side of the abdomen, with a distinct and easily obtained splash; the resonance extended high up in the axillary line. The treatment commenced on Monday, Nov. 7th, and the stomach responded at the end of 10 minutes. A considerable quantity of gas first escaped, and then a succession of "gushes" continued for nearly 20 minutes. This treatment was carried out each day, and by the fourth day the lower level of the stomach was above the umbilicus, and on the Friday, after the treatment was finished, the stomach was about 2 inches below the costal margin. He was taking his meals well, sleeping well, and had no feelings of pain or discomfort in the epigastrium. He played Rugby for his hospital team on the Saturday afternoon.

Since then the condition has been one of uninterrupted improvement, and although the treatment is being continued, there are practically no signs or symptoms to indicate any gastric trouble.

These severe examples are quoted to show the class of case to which this method of treatment is particularly applicable. In less severe conditions, the condition of the stomach yields rapidly to the treatment, and often at the end of two or three weeks all signs of dilatation, distension, tenderness on pressure, pain, and discomfort have disappeared.

Feeling, as the author does, that these conditions of stasis, chronic distension, and dilatation, and often muco-gastritis and erosion, have their origin in a disturbance of the motor function of the stomach rather than in the secretory function, he would venture to suggest that this whole group of conditions could fitly be described by the term "gasterakinesia" (gaster = the stomach; akinesia = without motion).

A great many of the observations upon which this article is based have been carried out in Dr. F. J. Wethered's clinique at Middlesex Hospital, and the author wishes to take this opportunity of acknowledging the generous manner in which Dr. Wethered has placed every facility in his way for carrying out the investigation, and for much valuable advice and counsel.

Harley-street, W.

NATIONAL LEAGUE FOR PHYSICAL EDUCATION AND IMPROVEMENT.—A special Clean Milk Campaign Fund is being raised by this league in order to enable it to circulate free copies of leaflets to farmers, dairymen, and housewives, giving simple, clear, and concise instructions for ensuring the cleanliness of milk. We have already spoken in high praise of the practical character of these leaflets. Contributions to the fund, however small, are invited, and should be sent to the secretary of the league, 4, Tavistock-square, London, W.C.

POWER OF SPEECH IN CUT-THROAT.

BY DHANJIBHAI H. MEHTA, L.M. & S.,
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IN THE LANCET of Oct. 29th, 1910, p. 1294, mention is made in an annotation of a case under the care of Dr. E. M. Merrins of Wuchang in which he says that his patient with the wound exposed could speak only in a weak whisper but so as to be easily understood, that he could speak much more distinctly with the throat bandaged, and could speak clearly and well with the neck flexed so as to close the wound, thus confirming your own opinion expressed last year (1909) that comprehensible speech is perfectly possible, even though the larynx is divided immediately above the vocal cords.

I am glad to be able to cite a case in support of your view. On Nov. 19th, 1910, a man was admitted to this hospital with a big gash in his throat just below the chin. The larynx was cut clean through, a thin ring-like piece of the thyroid cartilage and the epiglottis being at the upper part of the gash, and the rest of the larynx below. The cords could be seen working with each inspiration. The pharynx also was cut open so that one could see the back of it. The patient, when admitted about two hours after the injury, could speak in a fairly loud voice, even with the wound exposed, though a certain amount of difficulty was experienced in understanding him. With a bandage on, however, he could speak distinctly and loudly. In order to suture the wound we tried to put him under chloroform, applying the mask on his face (in the absence of the mouth-tube of a Junker's inhaler); but as he was breathing almost wholly through the wound we did not succeed for at least 15 minutes, when we removed the mask and placed it over the wound, the patient then promptly going under. It was, however, difficult to keep him anæsthetised for long, as it was not practicable to suture the wound and keep the mask on at the same time. I was therefore compelled to put in the sutures even while the patient was conscious, and was surprised to find that he did not show the least sign of pain all the time I worked on him. Probably there was some anæsthesia, though a colleague was inclined to attribute the state of things to a high degree of fortitude on the part of the patient.

The man when admitted had a slight cough, and the result was that the sutures gave way on Nov. 22nd, though he was fed by nutrient enemata only all the time. As he was getting weaker, however, and as there were three holes in the larynx, one on each side and one in the centre, from which a very foul discharge could be coughed out, feeding through the nose was begun and hot fomentations of iodine terchloride solution (20 minims of Professor T. K. Gujjar's liq. iodi terchloridi fort. to 1 ounce of normal saline) were applied every four hours. Granulations began to spring up, but there was a large quantity of healthy pus each time on the dressing, and as the patient began to complain of pain in the throat and inability to swallow his saliva with ease, hot boric fomentations were substituted from Dec. 1st. Under their effect the laryngeal openings gradually closed up one by one, and to-day (Dec. 18th) there is only a very minute hole left, which will close up in a day or two. As the patient got tired of the feeding through the nose, and as he began to have movements of the bowels soon after he was fed, he was allowed to have peptonised milk by the mouth on Dec. 15th, and from the 16th solid food.

The case, in my opinion, presents the following points of interest: (1) the difficulty of anæsthetising by applying the chloroform mask to the face in the ordinary way, while its application to the wound rendered operative measures very difficult; (2) the possible local anæsthetic action of the chloroform on the larynx, so that sutures could be put in without the patient showing the least sign of pain, even though conscious; (3) the wonderful way in which the wound granulated, notwithstanding the fact that there was a foul discharge from the openings in the larynx which engendered a fear that the patient might succumb to septic pneumonia; and (4) the loud voice and the fairly distinct speech, even with the wound uncovered.

Baroda.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF COMPLETE INTUSSUSCEPTION OF THE APPENDIX VERMIFORMIS.

By H. M. COOPER, M.B. LOND.,
LATE HOUSE SURGEON AT ST. GEORGE'S HOSPITAL.

A BOY, aged 10 years, when seen by me was complaining of constant attacks of abdominal pain. After a tea-party the child had had an attack of pain and sickness ten days before. His mother gave him an aperient and he temporarily improved, but the pain recurred eight days later. It came in attacks severe enough to make the child cry. His bowels had been open the day before he was seen by me. He had vomited twice. He looked ill; his tongue was furred, his temperature was 99° F., and his pulse was 90. There was some tenderness in the right iliac fossa, but his abdomen was soft and moved freely. No swelling could be felt; there was no peristalsis. The following day, after an enema, he had constant attacks of pain and sickness. His pulse was 120 and his temperature was 100°. In view of the marked rise in the pulse-rate I sent him to St. George's Hospital for operation.

The patient was admitted under the care of Mr. G. R. Turner. There was some slight general distension of the abdomen. Marked tenderness in the right iliac fossa. No tumour could be felt. The abdomen was opened through the right rectus sheath. No appendix could be seen. On examining the cæcum a mass as big as a man's thumb could be felt in its interior; the relations of the small bowel to the large were normal. On opening the cæcum the appendix in a gangrenous condition was found to be completely intussuscepted. It was cut off after ligature of its base; the parts were so friable that the ligature cut its way right through the gangrenous tissues. There was no bleeding. The opening into the cæcum was closed by a silk Lembert suture; the parts around were packed with gauze and a drainage-tube was introduced. The following day the temperature remained high (102°) and the pulse was rapid. The next day both pulse and temperature dropped, and convalescence, although prolonged by a considerable amount of discharge, was uninterrupted. No slough of any kind was detected in the fæces passed after the operation, though they were carefully examined.

Hampton-on-Thames.

NOTE ILLUSTRATING THE TREACHEROUSNESS OF APPENDICITIS.

By ROBERT E. HALAHAN, M.D. DUB.,
HONORARY VISITING SURGEON, BRITISH HOSPITAL, BUENOS AIRES.

THE following case of appendicitis seems interesting on account of the mildness of the symptoms compared to the pathological condition found present at the operation.

A campman, 24 years of age, was taken ill on a Wednesday afternoon with colicky pains in the abdomen. He took a purge, went to bed, and on Thursday got up at daybreak, feeling so well that he cleaned out a water-tank. At midday the pain returned and became so severe that he again took to his bed. His bowels moved freely, he slept pretty well, and on Friday he felt so much better that he decided not to come into town as he had intended to do. His employer, however, advised him to do so, and on Saturday, after a drive of some leagues to the station, he started on the 17 hours' train journey to Buenos Aires. The journey was accomplished without experiencing any marked pain, his bowels moved twice, and on the way he partook of tea, soup, fish, eggs, &c. On Sunday morning he presented himself at the British Hospital, rather ashamed of himself, he felt so well. His temperature on admission was 37·4° C., his pulse was normal, his tongue was clean, and beyond slight pain on pressure over McBurney's point he presented no abnormality. Rectal examination was negative. An ice-bag was applied to the right iliac region.

On Monday morning, when I saw him, his bowels had not moved, the slight tenderness of the day before had practically disappeared, pulse and temperature were normal, and the tongue remained clean. He said he felt quite well. I told him that I thought he had had a very slight attack of appendicitis, but as he lived so far from medical aid I advised operation, to which he agreed. The next day I saw him before the operation. He laughingly told me he was quite well, and felt like getting up and going out. He certainly looked it. Half an hour later I removed an appendix some 6 centimetres long, lying on the outside of the cæcum, with the point directed upwards and inclined towards the posterior parietes. From about 1½ centimetres from the cæcum to its tip the organ removed was quite gangrenous and bathed in evil-smelling foul pus. There was almost no inflammatory reaction to be seen in the surrounding peritoneum, and adhesions were conspicuous by their absence. The appendix was cut off close to the cæcum and the stump touched with pure carbolic acid and buried in the ordinary way. For ten days a drain was kept in at one angle of the wound, the rest of it having been stitched up. Recovery has been uneventful and complete.

The lesson to be learnt from such a case is obvious. When one meets with a case of appendicitis operate on it at once, because symptoms, no matter how trivial, are no guarantee against the most serious pathological conditions being present in the abdomen in this treacherous disease.

Buenos Aires.

A FATAL CASE OF MYASTHENIA GRAVIS.

By EDWARD GROUND, B.A., M.D. CANTAB.,
M.R.C.S. ENG., &C.,
HONORARY SURGEON TO THE WEST KENT GENERAL HOSPITAL.

THE patient was a man aged 51 years, married, one child. He had suffered for some years from occasional attacks of bronchitis. In November, 1908, he developed a cough with some fine crepitation at the right apex, a few tubercle bacilli being found in the sputum. He went to the home sanatorium at Bournemouth and returned in March apparently well. About a month afterwards he began to suffer from loss of appetite and muscular weakness, getting very easily tired after slight exertion, and noticing that occasionally objects looked double, especially when he was out walking. The muscular weakness gradually increased, affecting more particularly the facial muscles and those of the shoulder and back of the neck, so that when he smiled he had a peculiar appearance, the angles of the mouth being drawn upwards but very slightly outwards, and after standing or sitting for a short time he had to support his chin on his hand because his head was inclined to fall forwards. After talking for a little while he became tired and had difficulty in pronouncing his words distinctly, and when at his meals after a few bites his jaw muscles refused to act, so that he was obliged to rest at intervals during the repast; swallowing, too, became difficult after a few attempts. At times he complained of a tight feeling about the epigastrium and a difficulty in drawing a long breath, saying that "the bowels seemed to stop it from going any further." His knee-jerks were normal, as was his temperature except when he had a bronchial cold, but his pulse varied between 90 and 100.

As his condition was gradually getting worse, on Sept. 8th, 1909, I took him to see Dr. Purves Stewart, to whom I am indebted for the following notes taken at the time:—Speech, articulation, discs, pupils, and external ocular movements were normal, but the orbiculares oculorum were weak, the patient being unable to hold the eyes shut against resistance. "Nasal" smile was marked. The masseters were feeble and hardened very imperfectly. The palate and tongue were normal on movements. There was no cutaneous anæsthesia or analgesia. The neck muscles were very weak, the head tending to fall forwards, so that he had to hold it up on one hand, supporting that elbow with the other hand. The muscles of the hands were feeble, but less markedly than the proximal muscles. The diaphragm was very feeble. He could not lift one leg across the other without the help of the hand. The gait was normal, but feeble. No localised muscular atrophy was present. Reflexes: Knee and ankle jerks normal; shoulder jerks not elicited; plantars flexor. The left trapezius was tested for electrical reaction. It acted to faradism

briskly at first, but in a few seconds the muscular spasm faded away, even with a powerful interrupted current.

Injections of soamin were commenced on Sept. 10th and were discontinued on Oct. 10th after 12 injections. On Oct. 11th he caught cold, had a feeble cough, and a bad attack of dyspnœa during the night. He complained very much about this time that he could not talk properly when lying on his back owing to falling of his lower jaw, but he could talk more distinctly when he turned on his side; and when unlacing his boots or leaning forward to remove his socks he had to hold his head with one hand to prevent it from falling forwards. He remained in much the same condition until the end of October, when he thought that he felt a little stronger and had less difficulty in taking his food, but on Nov. 9th he again suffered from what appeared to be a slight attack of bronchitis with a very feeble cough, dyspnœa, and great restlessness, and he died on Nov. 11th from failure of the muscles of respiration.

A complete necropsy was not permitted, but a portion of the right pectoralis major was removed for microscopical examination. Patchy infiltration of lymphoid cells was present, the characteristic lesion in myasthenia gravis.

Soamin, hydraurum, iodide of potassium, mercury, and inhalations of oxygen were tried, but had no effect in arresting the progress of the disease to its fatal termination.

Maidstone.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SURGICAL SECTION.

Cancer of the Rectum.

A MEETING of this section, adjourned from Jan. 10th,[1] was held on Jan. 18th, with the President, Mr. RICKMAN J. GODLEE, in the chair.

Mr. A. BOYCE BARROW said that he wished to show how little inconvenience a patient experienced from the existence of a colostomy. He referred to communications from patients upon the subject, notably of one who had been operated upon eight years ago who took very active exercise, bicycling, &c. He spoke of the gradual manner in which he had been brought to adopt the colostomy in association with the operation for cancer of the rectum. He mentioned the case of a patient which illustrated that colostomy was often called for after operation with junction of intestine had been attempted. That case afforded evidence also of the difficulty of deciding upon the wisdom of attempting removal. He contended that colostomy was an important factor in successful removal of disease. It simplified the procedure and it allowed of the operation being more complete. It also rendered the aseptic or antiseptic character of the operation being perfectly conducted, and a patient realising the nature of his disease should be prepared to make a considerable sacrifice of his comforts in order to facilitate its complete removal. The loss did not compare with the loss of an arm or a leg affected with a similar disease. An operation for cancer in any situation of the body must aim at the removal of two conditions: (1) the evident and recognisable disease, and (2) the possible extension of the disease to surrounding and more or less distant parts. That extension of the disease might be unrecognisable. Mr. Barrow contended that any operation which did not embrace the second condition of extension or spread of the disease was behind the times—because it had been so abundantly shown that the great improvement in the results of the operative treatment of cancer depended upon the more complete removal of the lines of extension of the disease. He recommended the abdomino-perineal operation as the most complete method yet practised for the removal of the disease, and associated with colostomy the operation was a decided success. The operation was rather a long one, and one must take means to lessen shock. Mr. Barrow drew attention to hæmorrhage and the degree to which the anæsthetic was given as the most important factor in the production of shock. He said that very little blood need be lost in the abdomino-perineal operation because all the important vessels could be secured before being cut. He also gave instances to show the freedom of a patient from shock after long operation when those two factors were watched. A further recommendation of the method was its aseptic character, thus protecting the patient from the pain and dangers associated with any inflammatory condition. As regards the technique of the operation he placed the patient in the lithotomy position for the perineal part of the operation, and he did not remove any bone, not even the coccyx.

Mr. W. SAMPSON HANDLEY said that the view had been put forward that it was sufficient in rectal cancer to remove the growth as seen by the naked eye, together with an inch margin of the apparently healthy mucosa above and below. That was to say, an operation was performed which would suggest itself by the light of nature to a surgeon entirely unacquainted with the pathology of carcinoma. Years ago a similar operation was habitually done in the case of breast cancer; the growth was excised from the breast, and the axillary glands were left untouched. It was strange to remember that as late as 1887, when Banks advocated the routine removal of the glands in breast cancer before the Harveian Society, only a single speaker supported him. Step by step, as pathological knowledge had increased, the scope of the operation had gradually widened in some directions and restricted itself in others, until the modern operation for breast cancer, described with equal vigour and inaccuracy as "removing all but the ribs and crippling the patient for life," had established itself. And at each step of that progress there had been a marked improvement in results, so that local recurrence in the field of operation was now a rare event, and functional disability was practically absent. In the operative treatment of rectal carcinoma they might anticipate with confidence a similar process of evolution. The necessity of removing a considerable length of bowel was shown, not only by his own researches, but by the clinical results of Mr. Swinford Edwards, which were exactly in accordance with his observations. It had been argued that his observations on the spread of rectal cancer must be incorrect, because recurrence, when it took place, involved only a small area at the site of operation; it was implied that if permeation was so extensive the obvious recurrence must be equally extensive. To that he would reply that he had seen a primary sigmoid growth extending along the wall of the bowel nearly to the splenic flexure. He showed a specimen of rectal cancer with an isolated oval patch of secondary growth extending up the bowel three inches above the upper border of the primary growth. As a rule, however, the obvious recurrence was very local for two reasons, first because permeation was a slow process which only produced naked-eye phenomena after a considerable period. It was only in those regions where permeation had been long present, that was to say in the region close to the primary growth, that naked-eye recurrence was to be expected. Secondly, the area of the obvious recurrence was reduced by shortening of the affected length of bowel owing to contraction of the growth in a longitudinal direction. To remove an adequate length of bowel, to control hæmorrhage at the beginning of the operation, and, above all, for the careful removal with visual aid of the fat and glands of the meso-rectum, the perineal and sacral operations must be replaced by the abdomino-perineal methods. The attempt to preserve the natural anus by bringing down the cut end of the sigmoid led, as continental experience had shown, to a largely increased operation mortality. Moreover, it involved the risk of recurrence in the anal region, a calamity which took place in the last case he had operated upon by the perineal method. For those reasons, speaking generally, he advocated an operation on the lines described last year by Mr. W. E. Miles, and he believed his recent paper would lead to a great advance in the treatment of rectal cancer in this country. Mr. Handley had himself practised a similar operation for two years, and in three cases. All of those were living and had no signs of recurrence. Had the operation been the dangerous adventure depicted by one of his critics, he (Mr. Handley) could hardly believe that fortune would allow him an initial sequence of successes. Goullioud had published a series of 11 cases in women, all of whom recovered. It was necessary to recognise that the radical abdomino-perineal operation was a severe

[1] See THE LANCET, Jan. 14th, 1911, p. 100.

one, and that its mortality was higher in men than in women. In old or feeble patients of either sex, but more especially in men, he should still employ a limited perineal operation if the growth were situated low down, or should content himself with a colotomy. It had been stated in reference to a case of his operated upon by the combined method, that according to his own statement he had done a perfectly useless operation, because on examining the specimen he found evidence of permeation of the bowel as far as the line of section. He was quite ready to admit that he failed to attain the surgical ideal of complete removal, but his operation secured a better approximation to it than the limited operation, and in that way he believed that he minimised, so far as was possible in that particular case, the chance of recurrence. Surgeons often claimed far too much credit for their successes in dealing with cancer. An absolutely clean removal of every cancer cell present in the body was probably a rare event. Freedom from recurrence was common because natural processes of cure destroyed or inhibited the few remaining cancer cells. Those facts explained the not inconsiderable amount of success attainable by very incomplete operations. They in no way justified the abandonment of the surgical ideal of complete removal, for experience had shown, more especially in breast cancer, that the more extensive operations, if guided by pathological knowledge, produced greatly improved results. The ideal might be unattainable, but the struggle to reach it found its full reward. One advantage of the combined method was that they widened the limit of operability and enabled them to aim more often at cure instead of merely at palliation. If the perineal method was applicable only to one case in four of rectal cancer surely it could not be the ultimate resource of surgery. It was the duty of surgeons in dealing with rectal cancer to advance along the lines laid down by pathology so far as they were able without subjecting the patient to undue risk. It was, of course, to be much regretted that a reasonably safe, and at the same time an adequate, operation could only be done at the price of a colostomy opening. But the disability, though real, was not inconsistent with a normal life of work and social intercourse. The methods which aimed at a restoration of the normal function of the anus were only successful in a small percentage of cases. The ideal result of those cases was dearly bought at the cost of many operative fatalities or at the cost of preventable recurrences. Other cases remained with a permanent sacral anus or suffered from incontinence or stricture. If the surgery of rectal cancer was to advance the ideal of restoring anal function must be abandoned as inconsistent with the other and far more important ideal of complete and safe removal of the disease on the lines laid down by pathology. It must, however, be admitted that the pathology of rectal cancer was not yet fully worked out. For some years he had been endeavouring to trace the spread of cancer of the rectum, and until recently without success, owing to the proneness of the carcinoma cells to mucoid degeneration and the consequent difficulty of recognising them in microscopic sections. About two years ago it occurred to him to employ mucicarmine, a specific stain for mucus, and by the aid of that stain he thought he was able to demonstrate the spread of permeation along the mucous lymphatic plexus of the bowel a distance of six inches from the primary growth. He was now able to demonstrate another case showing similar appearances extending to a distance of four inches from the obvious or naked-eye edge of the growth. It rested with his (Mr. Handley's) critics to explain what those appearances were if they were not those of permeation of the mucous lymphatic plexus by cancer cells. He had been unable to find wider permeation in a small series of normal rectums. Though an occasional isolated element might take on the mucicarmine stain, nothing could be seen in the normal bowel in the least comparable to the small groups of sharply defined mucoid cells, irregular in size and shape, which might occur at frequent intervals in the cancerous rectum to a variable distance from the macroscopic edge of the growth in the plane of the mucous lymphatic plexus. Beyond a certain point they ceased to be visible, and that point was, in his opinion, the true microscopic growing edge of a rectal carcinoma within which the surgeon's knife must not willingly intrude.

Mr. F. C. WALLIS said that during the last ten years the surgery of the rectum had made great progress, and this was more particularly the case in other countries. But in this country also in the last few years a much more intelligent interest had been taken in this branch of surgery by practitioners at large, who more and more appreciated what a valuable asset a proper knowledge of this subject was, and what before were looked upon as more or less mysteries were now treated in a rational manner, and thus the relief of pain for the patient was much earlier and of a more practical character. The first essential for good results was early diagnosis, and that could only be obtained by a proper examination being made at the earliest moment the symptoms were complained of instead of the whole thing being shirked as long as possible by both practitioner and patient. This was a grave responsibility which rested with the practitioner, and it behoved those who had the opportunity of early examination to do this as soon and as thoroughly as possible. If this became a routine practice the diagnosis would be made much earlier, and so the results of the operation would be greatly improved. Before deciding if any operation shall be done in cases of rectal carcinoma, one of the most important matters to decide was whether the growth was a fixed one or not. This decision, as a rule, should not be made until the patient had been examined under an anæsthetic, and even then the decision might be of some difficulty, especially if the growth was adherent in front to the bladder, vagina, or uterus. In such cases the growth might be easily pulled down with the viscus to which it was adherent, and thus give a false idea of free mobility. When any such possibility as this occurred during diagnosis it would be obviously wrong, and might also lead to serious disaster if an operation was undertaken either from the perineum or by one of the posterior routes, for when the growth was arrived at it might be found fixed. Also, other parts of the colon and even the small intestines might adhere to the growth. To obviate any such catastrophe, and at the same time to obtain a more thorough knowledge of the growth and its surroundings, an exploratory laparotomy should be made in the mid-line. This was an expediency which he suggested should be made much more use of than was at present the case. The question as to what particular operation should be undertaken was one which was almost acute in its present interest. Any new operation which involved a decided alteration of technique was usually commenced with enthusiasm. The enthusiasts often overdid it and operated on all sorts of cases which were in one way or another unfitted for such a procedure, with the result that the operation was discredited by those whose practical experience, having extended over some years, had settled into a groove in which work might run smoothly but perhaps not so much progress was made, and thus an important advance had often been checked for a considerable time. It was to be sincerely hoped that such would not be the fate of the abdomino-anal operation, which was now so much advocated and was a good one in suitable cases. The technique of this operation had been thoroughly described, and the main details of it could soon be learnt by one or two operations on the cadaver. But this was the least difficult part of the work. The age of the patient, the character and size of the growth, its situation (particularly with regard to its surroundings), the length of the sigmoid loop, the size of the pelvis, and the amount of fat generally in the abdominal cavity, were all matters of clinical importance which it was essential to consider before undertaking this operation. But it could be truly said that most of these points had to be considered in any operation for a high-lying cancer of the rectum. But it was probably for the low-lying carcinomata that this operation would obtain the best results. The involvement of the lymphatics in the submucous plexus in certain cases of cancer of the rectum was admirably demonstrated by Mr. W. Sampson Handley, but whether this was satisfactory to everybody was not certain. Personally, on reading Mr. Handley's views and thinking back over his (Mr. Wallis's) cases he was much impressed with the fact that a certain proportion of such cases which had done extremely well had had a return of the growth in the lower segment after an interval of a year or 18 months. And he (Mr. Wallis) thought that in such a case if the abdomino-anal operation had been performed and the bowel above the growth more freely removed recurrence would not have occurred. It was for such cases that the abdomino-anal method was desirable, and from which probably the best results would be obtained. He could not feel enthusiastic

as to the ultimate fate of the bigger operation which had been performed—namely, excision of the whole of the rectum and possibly a portion of the sigmoid with the establishment of an iliac anus. It could only be very few cases in which such a measure was justifiable, and even amongst the few that were justifiable it would hardly be expected that anything but a high percentage of mortality would obtain. When a rectal carcinoma required such severe measures it was probably far better treated by an ordinary colotomy, and he could give various instances of people who had lived comfortably with a colotomy and a carcinoma for many years, the longest he knew of being ten. With regard to the other operations he was strongly of opinion that the best method of dealing with rectal growths not involving the sphincters was by the sacro-anal method. The great point which he claimed in its favour was that instead of suturing the last two or three inches of the bowel to that which was brought down the anal mucous membrane was excised, and the cut end of the bowel above the growth brought down and stitched to the anus. This was quite a simple matter and all possibilities of a sacral anus forming and the almost certainty of a stricture were done away with. This was a method which he had adopted for the last 12 years and which could be well combined with the abdominal incision when necessary. When the growth involved the sphincters then a wide excision of these muscles was necessary, and this operation could usually be performed through the perineum, especially if a preliminary colostomy had been performed, and, indeed, in such cases this was essential. When a growth was inoperable there was no doubt that great comfort was given to the patient by a colostomy. He (Mr. Wallis) had already mentioned that patients lived in comparative comfort with good general health for many years after this operation had been performed, and he was constrained to mention it again because he remembered a few years ago at the Medical Society of London when a discussion took place on this very subject that grave doubts were cast upon any possible benefit being derived from such a measure. There was no question as to the immense benefit derived especially if the toilet of the colon, which was well known now to most good surgical nurses, was daily carried out and if the growth itself was prevented as much as possible from becoming septic by appropriate treatment. He could not advocate any of the various fancy operations for colostomy, which, in his experience, only caused trouble, and rarely, if ever, possessed those particular virtues which were claimed for the operation. One other point he would suggest in the operation, and that was that the bowel should be opened at the time of the operation. This saved much trouble, was much more comfortable for the patient, and with ordinary care was entirely free from all risks. He had no knowledge of any good effects which had been produced by the action of radium upon a rectal carcinoma.

Mr. P. LOCKHART MUMMERY said that a point which he thought had not received sufficient attention in the discussion was the proportion of cases of cancer of the rectum which were seen in an operable condition. Taking 100 consecutive cases from his own records he found that 8 refused operation, 35 were operable, and 57 inoperable. He said that his definition of an inoperable case was one in which it was not possible, even by an extensive abdomino-perineal operation, to remove the entire growth owing to its involving other important structures which could not be removed or to its having already caused secondary deposits. In addition a few cases were inoperable on account of the age or general condition of the patient. Mr. Harrison Cripps had found only one case in four operable, but that was because he took a much more limited view of what was an operable case. From his (Mr. Mummery's) experience he should say that it took as a rule from six to nine months for a growth to become inoperable from the time well-marked symptoms first appeared. He thought that was a most lamentable condition of things and that a very much larger percentage of cases ought to be seen in the early stages. The cause of this was because patients did not seek advice soon enough and medical men did not make an early examination. It was possible by means of the sigmoidoscope to diagnose any growth below the middle of the pelvic colon in its earliest stage. With regard to the question of what features in a case they should consider as rendering the case inoperable, he believed they should operate whenever there was a reasonable chance of saving the patient. He had seen most brilliant results from what appeared at first to be hopeless cases. Of course, by only operating in favourable cases and refusing to operate in those which were doubtful one could get very good statistical results, but their object was not to pile up good statistics but to do the best they could for the patients who consulted them. And if they could save even a comparatively small percentage of the borderland cases it was worth attempting even though it would almost certainly ruin their statistics. He was one of the first to advocate entire removal of the rectum and cleaning the hollow of the sacrum in June, 1907, and he believed that to be the proper practice, but it was impossible to make hard-and-fast rules, and he did not consider it legitimate surgery at the present time to perform the combined operation in all cases. Clearing the posterior part of the pelvis and removing the rectum were quite sufficient in a certain proportion of cases, and he had patients living as long as eight years after that operation. It was necessary to be guided by the condition present. One of the greatest advantages of the abdomino-perineal operation was that it enabled them to deal successfully with cases otherwise inoperable, but he could not agree with those who maintained that it should be performed in all cases. Local removal of the growth by simply slitting the sphincters or by the posterior route was not in his opinion sufficient, and it had the further great objection that a septic granulating wound was inevitable. By removing the whole rectum and bringing down the sigmoid it was possible to secure primary union in the wound. He had so far had three cases in which complete primary union occurred after removal of the rectum and cleaning out the sacral hollow. Two of those were private patients, and they were out of bed in 11 days and able to walk out of the nursing home in three weeks. The third was a hospital patient, and he also returned home in three weeks. The mortality from resection of the rectum was due to sepsis and peritonitis in over 90 per cent. of cases. The reason that local perineal removal had a low mortality was that sepsis in the wound, though inevitable, was not nearly so serious a matter as in the more extensive operations. If they eliminated sepsis, as they could, the mortality would be as low from the more extensive operations.

Mr. C. H. FAGGE said that his own small experience had been entirely opposed to any of the perineal or sacral operations, and in the last two years he had, except on one occasion, given them up for the abdomino-perineal method; his experience of Kocher's operation (for he agreed with Mr. Waterhouse that sufficient room could be obtained without removal of any part of the sacrum, and that therefore a complete Kraske was unnecessary) had been unfortunate, for all except one of his cases, about ten in number, had died from recurrence after intervals of six months to two years. He thought the first speakers who had spoken in favour of perineal methods alone had rather given their case away by admitting that that method was unsuitable when the growth had extended beyond the bowel wall, for in his experience many patients did not come under observation until the peri-rectal tissues had become involved, as one found in dissecting the excised mass after operation. He believed that the abdomino-perineal route would give some measure of success in even those cases. Some two or three years ago, when becoming dissatisfied with the perineal operation, he met with two cases which finally settled the question as far as he was concerned; in the first, Kocher's operation on a man was followed by death from pneumonia after a few days, and at the necropsy several secondary deposits were found in the liver; the second case was sent to him by one of his medical colleagues, who was much pleased to have detected an early case with the sigmoidoscope. After his last experience he (Mr. Fagge) refused to operate from below without first exploring the abdomen, when he found extensive cancerous peritonitis, and of course no radical operation was done. He had carried out the abdomino-perineal operation six times on patients of his own, and had also on several occasions assisted one of his senior colleagues; in some cases they had operated together, one from the abdomen and the other from the perineum, but had found it unsatisfactory. In one of those six cases he had carried the operation out in two stages, but the bowel, detached and pushed down into the pelvis, had

sloughed, and the patient died from peritonitis; he had seen the same thing happen in the practice of another surgeon. In one of the six patients operated upon by that method it was found after removal of the mass that the rectum was widely infiltrated by tubercle which had originated in the left tube; that was also removed. In the other five microscopical examination showed typical carcinoma; three died shortly after operation, either from shock or peritonitis; and two recovered, but neither had yet passed the three years' limit. As an alternative, when the growth was situated in the upper part of the rectum the abdomino-anal operation as described by Miss Aldrich Blake and as practised by Mayo and others was to be considered, but he was of opinion that for growths in the ampulla—the usual site of rectal neoplasms—it was wise to sacrifice the levator ani and other tissues around the bowel. Unless all the muscles and their nerves could be left strictly intact there was much risk of an incontinent functionless anus after any operation such as the abdomino-anal, which necessitated a perineal dissection, and in his opinion a patient was in those circumstances more comfortable with a colostomy, so that as a routine operation for rectal cancer he preferred the abdomino-perineal method.

Mr. C. GORDON WATSON said that most of the points which he wished to emphasise had been brought out by the previous speakers. He had taken considerable interest in the abdomino-peritoneal method of excision of the rectum during the past two years, and since April, 1909, he had excised the rectum by this method ten times, making a permanent colostomy in eight cases and bringing the bowel down to the anus in two cases; he had also assisted his senior colleagues at similar operations on nine occasions and had taken the opportunity of watching the methods of other surgeons. He believed that the abdomino-peritoneal method with colostomy was the best operation for all low-lying growths which were operable, but that when the mesentery was long enough and the growth was situated above the peritoneal reflexion on to the bladder or vagina the bowel might be brought down through the undamaged sphincters, and he thought that cases which were not suitable for the radical operation should be treated by simple colostomy. He said that the great objection to the radical operation at the present time was the high mortality, which, so far as he had been able to estimate, was about 40 per cent. But he believed that this mortality would soon be rednced to 10 per cent. or less when surgeons were more familiar with the technique. As Mr. Wallis had pointed out, when a new operation became prominent less discrimination was sometimes shown in the selection of cases than at a later period, when surgeons were more familiar with the indications for such an operation. This naturally raised the mortality. When Wertheim's operation for complete extirpation of the uterus by the abdomen was first practised the mortality was equally high, but it had now been reduced to something like 10 per cent. The nature of the operation and the conditions upon which the mortality depended were very similar to those of complete extirpation of the rectum by the combined route. He laid considerable stress on the preliminary preparation of patients for this operation, and he believed that if these preparations were properly carried out the shock was, and should be, a negligible factor. In the cases upon which he had operated he had had no cause for anxiety on the question of shock. The great danger, and the one most difficult to avoid, was sepsis. With regard to the preliminary preparation, he strongly believed in giving a quarter of a grain of morphia one hour before the operation. He had kept all his patients in bed for a week or more before the operation, and had had all carious teeth attended to, and had administered naphthaline tetrachloride internally during that period with a view to diminishing the intestinal flora. He had also in some cases given a b. coli vaccine as a prophylactic before the operation, and in one case an anti-coli serum. The vaccine should not be administered too soon before the operation, because of the danger of operating during a negative phase. Probably the best time to administer the vaccine was five or six days before the operation, and the vaccine used should be preferably made by cultures obtained from the patient's own excreta. He was making further investigations on this point in various cases of intestinal surgery, and he would be glad to know if any Fellows of the society could state their experiences with regard to the value of prophylactic inoculations in such cases. Mr. Mummery emphasised the value of the sigmoidoscope in early diagnosis. In two of his (Mr. Watson's) cases the diagnosis was made solely by means of the sigmoidoscope. Both cases were early carcinomata in the descending loop of the pelvic colon, and could not be felt either per rectum or per abdomen. It had been urged against the operation that it occupied too long a time. He thought that if the details of the operation were carefully worked out beforehand, much time could be saved. In his cases the longest time taken for the complete operation was 1 hour and 40 minutes, and the shortest time 1 hour.

The PRESIDENT said that personally he was becoming convinced that the operation which would be most used was the removal of the rectum and lower part of the sigmoid leaving a permanent colostomy wound.

Mr. SWINFORD EDWARDS, in the course of his reply, explained that he was not wedded entirely to any particular operation, because each case must be judged on its own merits.

Sir FREDERIC S. EVE has kindly furnished us with the following additional note of his remarks made on Jan. 10th. He said that the surgery of cancer was the surgery of the lymphatic system. It was only in recent years that the wide permeation of cancer had been understood. Mr. Handley believed the permeation to extend five inches above and below a rectal growth. Judged by clinical observation and the test of permanent cure, he felt no doubt that operations of the Kraske or perineal type were not sufficiently thorough. Steinthal, taking the statistics of numerous surgeons, came to the conclusion that primary cure was obtained in only one-fourth or one-fifth of the cases operated upon. Gant, taking the work of nine surgeons, found permanent cure in only 15·6 per cent. He looked up Mr. Edwards's article in Burghard's "Operative Surgery" and found that out of 50 cases traced, in only 7 did patients reach the three years' limit, and only 3 of these had exceeded it. Every surgeon was aware that the three years' limit was too short, for plenty of cases recurred after that time. Two of his own cases had recurred after five years. With regard to Miles's statistics, out of 58 cases traced, 54 were known to have had recurrence. Even allowing with Mr. Cripps that some of these cases were unsuitable for operation, it was impossible that any large number of them could have been. These facts showed very clearly that the Kraske or perineal method could not be trusted to give a permanent cure. For many years in clinical teaching he had emphasised the importance of exploring the abdomen in the majority of cases of rectal cancer. The necessity of that was obvious—to ascertain the condition of the glands, of the pelvic peritoneum, the amount of fixation of the upper part of the bowel as well as that of the lower, and finally the condition of the liver. For that reason he formerly advocated the performance of a preliminary colostomy. The advisability of exploring the abdomen was a strong point in favour of the abdomino-perineal method. In recent years his work in that department had been largely influenced by an important article by Rotter on the combined operation, which appeared in Langenbeck's Archives for 1906. Rotter strongly advocated the abdomino-perineal operation with restoration of the continuity of the bowel. The speaker from his own experience believed that the operation which fulfilled the most important conditions—namely, low mortality and a prospect of permanent cure—consisted in performing the abdomino-perineal operation, with the formation of a permanent colostomy. He wished to allude to one or two points in the steps of the operation. After the abdomen had been opened the peritoneum was incised on the outer side of the pelvic colon and sigmoid flexure, and the large intestine, with the peritoneum, was stripped inwards to the middle line; the inferior mesenteric artery was thus exposed with the left ureter. A ligature was placed on the inferior mesenteric artery as high as necessary according to the condition of the glands which lay along it. That completely controlled the blood-supply. The glands and cellular tissue were stripped from the sacrum, and the peri-rectal tissue removed. He agreed with Mr. Miles that in many cases the fat in the ischio-rectal fossæ and the levator ani should be taken away. Since many rectal cases occupied the ampulla it seemed to him impossible to excise sufficient bowel below the growth, unless the anus were sacrificed. He always separated the rectum as low as possible from the abdomen

(as far as the levator ani), and then performed the rest of the operation through a perineal incision, having first closed the peritoneum through the abdomen. The operation of restoring the bowel with the combined abdomino-perineal operation could not be dissociated from the great risk of sloughing of the bowel or of leakage from giving way of the posterior sutures. It was to that sloughing and leakage, together with the more prolonged operation, that the high mortality of the abdomino-perineal operation was due. Among 25 cases published in 1906, Rotter's mortality was 44 per cent.; and in 26 cases published in 1908 Mayo's mortality was 26 per cent. During the last two years he (Sir Frederic Eve) had performed the abdomino-perineal operation, combined with a permanent colostomy, with uniform success. He believed that that operation would present a very low mortality. Though he advocated that operation for the greater number of cases of carcinoma of the rectum—viz., those occupying the ampulla or true rectum—he recognised that when the disease affected only the anal canal and anus it might be right to attack it from the perineum, but the coccyx should be removed, the sacrum cleared, and the groin glands extirpated. If the disease occupied the lower part of the pelvic colon, so that it could not be dealt with entirely abdominally, and involved only quite the upper part of the true rectum, then it was justifiable to attempt the combined operation, with restoration of the bowel. For the restoration of the bowel the invagination method appeared to be least likely to be followed by sloughing. In performing it, there need never be any anxiety as to the possibility of bringing down the colon. Every surgeon had used the incision on the outer side of the sigmoid flexure in order to mobilise it. Mr. Moynihan had suggested that that method could be still further utilised in the combined operation with restoration of the bowel, to mobilise the descending colon by prolonging the incision upwards along the descending colon. In the performance of the combined operation, after closure of the abdominal wound, the restoration of the bowel should be carried out through a perineo-coccygeal incision through which the tumour, with the lower portion of the bowel, should be brought and the junction effected. In this way soiling of the peritoneum was avoided and the perineal wound was very useful for drainage of the pelvis; it also served to keep an observation on the suture line.

PATHOLOGICAL SECTION.

Gall-stones and Cancer.—Microscopic Structure of Uric Acid Calculi.—Complement-fixation.—Gas-producing Power of Intestinal Bacteria.—Protozoon-like Bodies in Yellow Fever.

A MEETING of this section was held on Jan. 17th, Dr. F. W. MOTT, the President, being in the chair.

Dr. J. P. CANDLER (of the Pathological Laboratory of the London County Asylums), in the course of a paper on the Incidence of Gall-stones and of Primary Carcinoma of the Gall-bladder and Biliary Passages in the Insane, said that gall-stones were present in practically 80 to 90 per cent. of all cases dying from primary carcinoma of the gall-bladder; while it had been remarked by Ticehurst and others that gall-stones were rarely found when the biliary passages were affected by growth secondary to that elsewhere. So far as the Claybury statistics showed they confirmed Ticehurst's statement. In primary carcinoma the gall-bladder contained calculi, while cases in which the liver was affected with growth secondary to malignant disease commencing in some other organ showed little or no excess in the incidence of gall-stones. His question was whether the association between gall-stones and primary malignant disease of the gall-bladder was so frequent as to justify the opinion that because calculi were found in 90 per cent. of cases of primary carcinoma of the gall-bladder, they were to be looked upon as so potent a factor in the causation of that disease. On the one hand they had statements to show that no less than 20 to 18 per cent. (Hale White and Ticehurst), and 14 to 4 per cent. (Rolleston) of cases of cholelithiasis succumbed to malignant disease of the gall-bladder and ducts. On the other hand, Mayo Robson stated that cancer of the gall-bladder was by no means frequent, and as a primary affection was somewhat rare. These two statements were diametrically opposed. The estimates of Hale White, Ticehurst, and Rolleston were based on hospital statistics. They could not in his (Dr. Candler's) opinion be taken to represent the incidence among the general population. They were based on selected cases, among the general population, who, on account of symptoms arising from the onset of carcinoma, sought hospital advice. The inclusion of those cases would at once increase the incidence of carcinoma of the gall-bladder in relation to gall-stones, and upset the balance of comparison with that of a general population. The incidence of carcinoma in a general hospital could not be taken as indicative of the prevalence of the disease in a general population, nor could the incidence of lung affections among the insane be used to indicate the frequency of those conditions among the sane. If they took Hale White's estimate (viz., that about 20 per cent. of cases of gall-stones ultimately developed primary carcinoma of the gall-bladder and biliary passages) and applied it to the Claybury statistics, then out of the 315 cases there should have been as many as 60 cases of primary malignant disease of those regions, or assuming that 10 per cent. of a general population surviving the age of 20 suffer from gall-stones, then 2 out of every 100 persons should develop primary carcinoma—a supposition which he thought was not justified. It might be suggested that the smaller incidence of primary carcinoma among the insane was due to the fact that their average age at death was lower than the average age at death of a general population surviving the age of 20. If all the cases of gall-stones dying before the age of 60 be eliminated from the Claybury statistics, there still remained 197 cases of gall-stones occurring from the age of 60 upwards. If Hale White's estimate be applied to those cases only, there should have been close on 40 cases of primary carcinoma of the gall-bladder in the Claybury statistics. It was not his intention to discuss the various theories as to how gall-stones acted in producing carcinoma of the gall-bladder, or as to whether gall-stones preceded or were formed after the commencement of malignant disease of that organ; there was probably truth in both suppositions. If, as Mignot believed from experimental researches, a stratified well-formed biliary calculus could be formed in six months, it seemed quite possible that a calculus could be formed as the result of changes set up in the mucous membranes by the onset of carcinoma before operation on, or death, of the patient. From the evidence obtained from the post-mortem statistics at Claybury Asylum he was inclined to the opinion that the incidence of primary carcinoma of the gall-bladder and biliary passages in its relation to gall-stones among the general population was by no means so great as hospital statistics would lead them to believe, and that consequently there was not sufficient justification for assigning to gall-stones so important a rôle in the production of primary malignant disease of the gall-bladder and ducts.

Professor S. G. SHATTOCK demonstrated the Microscopic Structure of Uric Acid Calculi. He described the structure as studied by transparent sections made by the methods adopted by pathologists. Some such calculi were cancellous, others compact in structure; that was an obvious macroscopic difference, and it was connected with a difference in the mode of crystallisation. In the cancellous there was a nucleus of cuboidal crystals grouped in irregular trabeculæ, and upon that a series of concentric arcades with interspaces, built up of similar crystals, constituted the "body." In the case of the compact variety the structure was of cones of long crystals set radially to the centre; those might be marked with a series of concentric striæ, and by coarser, less well-defined zones of a finely crystalline material which might almost be named bacilliform and which lay in the lateral interstices between the longer elements. That material was uric acid; for although in marked amount, the most careful chemical analysis of the calculi, in bulk, showed a complete absence of ammonium, sodium, or calcium. A comparison of the different elements with those met with in urinary sediments showed that whilst the cuboidal crystals of the cancellous variety could be matched, elongated forms were rare. The elongation of the crystals, and so the production of the compact forms, was attributed to a highly saturated condition of the urine. The length assumed by crystals in supersaturated solutions was well shown. Miers had put forward the view that it arose from the diminished saturation of the fluid between the sides of adjacent crystals produced *ipso facto*

by the crystallisation, the extremities being free to grow at that end which lay in contact with the supersaturated part of the solution, whilst growth in other directions was retarded. In a supersaturated solution, agitation produced a shower of crystals; the deposition of the finely crystalline uric acid in association with the tufts of long crystals in the calculi was to be explained in the same way. In regard to the nuclei of uric acid (or other) calculi, although shed epithelium and mucus, &c., would always be available, their presence was not essential to start a concretion. In the cancellous kinds the nucleus was a chance aggregation of cuboidal crystals; and such a collection of "rubble" at times formed the very centre of a compact calculus; though in other cases a compact concretion arose as a radially disposed collection of longer forms, such as might arise in a supersaturated fluid at various independent points.

Dr. H. R. DEAN described a series of experiments designed to differentiate the various members of the typhoid and paratyphoid group. The experiments lead to the following conclusions: 1. By the use of the complement-fixation method B. typhosus, paratyphoid A, and paratyphoid B can be easily differentiated from one another. By the use of a suitable dilution of serum it is possible to differentiate paratyphoid B from B. Aertrycke. This series of experiments entirely confirms the classification of Bainbridge. 2. The complement-fixation method affords an extremely delicate and specific means of differentiating between various members of the typhoid and paratyphoid group. 3. Very closely allied organisms can only be differentiated after experiments sufficiently extensive to ensure a knowledge of the dilutions most suitable to the serum and extracts in use. 4. The group reaction and the degree of relationship between members of the group can be demonstrated by the use of various dilutions of an antiserum in the presence of extracts made from homologous and heterologous strains. 5. Under certain circumstances the degree of relationship can be seen during the course of an experiment by observing the time of onset of hæmolysis in the tubes containing the various extracts. 6. The group antibodies can be removed from the serum by a suitably arranged absorption experiment. 7. Excess of bacterial extract has an unfavourable influence on the fixation of complement. 8. The maximal fixation of complement is obtained when antigen and antibody are present in certain definite proportions.

Dr. W. J. PENFOLD read a paper on the Variability in the Gas-forming Power of Intestinal Bacteria. He said that if the B. coli (Escherich) be grown on agar containing a suitable concentration of monochloracetate of soda marked diversity of size was obtained as between the different colonies, some being very large and some being very tiny. If the concentration of the chloracetate was weaker this diversity of size did not occur, but secondary colony formation occurred. By repeated plating on this medium a strain highly resistant to chloracetate was obtained. This resistant strain would be found to have lost the power to produce gas from glucose and lactose and other sugars, but to retain the power to produce gas from alcohols—e.g., mannite, sorbite, dulcite, and glycerine. B. enteritidis (Gaertner) could be varied under the same conditions so that its gas-producing power in the case of different sugars was abolished. This varied organism produced, however, a good yield of gas from alcohols. This B. coli, which after the above treatment had lost the power to produce gas from glucose, retained the power to produce gas from formates. It gave a full acid reaction in glucose-peptone water overnight. This acid reaction occurred quite well in the anaerobic state. Anaerobic growth in glucose-peptone water did not cause the return of the power to form gas from sugars. Various considerations suggested that three ferments were required to ferment glucose in the case of the B. coli: one to produce formate from the glucose, one to split up the formate to carbonic acid and hydrogen, and one to produce acid from glucose other than formic acid. What this acid was would not be known until the chemical products of the new variety were investigated. It was unlikely to be derived by oxidation of the sugar since it occurred in the anaerobic state. The coli-form organisms isolated from urine seemed frequently to be atypical, and work by Herter, Mair, and Wilson, taken into consideration with the above production of artificial varieties, suggested that they might possibly arise by selective processes occurring in the body.

Dr. H. SEIDELIN, who had worked for some years at Yucatan, Mexico, demonstrated certain Protozoon-like Bodies in the Blood Organs of Yellow Fever Cases. The microscopical specimens showed intra-corpuscular and free forms from blood smears taken during life. Some of the intra-corpuscular forms presented a certain likeness to malarial parasites and the ring-shaped collections of chromatin-points seen in a kidney specimen suggested asexual forms undergoing division.

LARYNGOLOGICAL SECTION.

Exhibition of Cases and Specimens.

A MEETING of this section was held on Jan. 6th, Dr. P. WATSON-WILLIAMS, the President, being in the chair.

The following cases, specimens, &c., were shown:—

Mr. CECIL GRAHAM: 1. Pharyngeal Cancer. 2. Chronic Ulcer of the Nasal Septum. There had been four attacks of nose-bleeding, and the galvano-cautery had been applied to a small ulcer on the right side of the septal cartilage. The ulcer was now seen to be triangular in shape, and the septal cartilage was exposed but not perforated.

Mr. A. J. WRIGHT: A woman, aged 34 years, with Swelling of the Arytenoids, Left Ventricular Band, and Inter-arytenoid Space, apparently tubercular, although van Pirquet reaction was twice negative. There was no pyrexia and no improvement with iodines.

Mr. NORMAN PATTERSON: A Denture removed from the Hypopharynx and Upper Part of the Œsophagus. The tooth-plate had disappeared while the patient was swallowing a piece of bread-and-butter. On examination great swelling and congestion were visible in the arytenoid regions. The tooth-plate was not visible, but was shown by a skiagram to be present. Under an anæsthetic the plate was seized and dragged out of the œsophagus, but was caught in the anterior pillar of the fauces, and had to be divided by means of bone forceps before it could be removed.

Mr. ALEXANDER R. TWEEDIE: Specimen of Deformity of the Palate with swelling shown to be pituitary. The patient died from inanition six months after birth. Median hare-lip existed and cleft of the soft palate, through which a soft swelling protruded springing from the roof of the naso-pharynx.—Dr. A. KEITH gave a very interesting demonstration on this specimen, which was a most important one from a developmental point of view, a mass of smooth muscle fibre being found between the two wings of the developing septum nasi. The soft swelling before mentioned seemed to represent pituitary tissue, and Dr. Keith considered that the growing round of bone and raising up of the pituitary body which normally took place in the development had failed in this case.

Dr. G. WILLIAM HILL: A new pattern Expanding Œsophagoscopic Funnel, and an improved Instrument for Examination of the Œsophagus and Stomach, combining direct and indirect vision. The stomach was brilliantly illuminated by the instrument, and small objects detected with great ease.

Mr. W. STUART LOW: 1. Tumour in the Left Parotid Region diagnosed as Cystic Adenoma. The exhibitor strongly advised early removal of tumours, though apparently innocent, in this region. 2. A man, aged 48 years, with a Hard Swelling in Right Submaxillary Region, considered by members to be probably a salivary calculus.

Mr. C. A. PARKER: Case of Laryngeal Tuberculosis.

Dr. W. H. KELSON: Case of Naso-pharyngeal Polypus in a young man. This had recurred after removal two and a half years ago, and Dr. Kelson proposed now to do a more extensive operation for its complete removal.—The PRESIDENT advised division of the septum nasi in this case in order to increase the accessibility of the tumour.

Dr. G. C. CATHCART: Tumour taking Origin behind the Right Tonsil, thought to be a fibroma; also a case of Ulceration of Left Vocal Cord in a man aged 67 years.—Case considered by members to be one of pachydermia, and Dr. W. JOBSON HORNE accounted for the hoarseness by the fact that the vocal cords were not quite on the same plane.

Dr. LIEVEN (Aix-la-Chapelle) demonstrated Instruments for the Intravenous Injection of "606." He stated that the routine treatment for syphilis should still be by mercury, and that relapses after "606" were considerably more frequent than generally supposed. It was most important in the intravenous injection of "606" that the drug should be introduced directly into the cavity of the vein, and should not get into the subcutaneous tissue at all. To make

certain of this blood was first allowed to flow from the vein into the apparatus, and then saline fluid injected before the "606" was introduced; and after the dose had been given saline fluid was again passed into the vein.

Dr. R. H. SCANES SPICER: Case of Malignant Disease of the Pharynx, with skiagram showing irregularities of the vertebræ, supporting his views as to the bearing of chronic irritation on the causation of cancer.

MEDICAL SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on Jan. 23rd with Mr. CHARTERS J. SYMONDS, the President, in the chair, who announced that the Fothergillian gold medal given triennially had been awarded to Dr. F. W. Mott for his researches on the nervous system, especially in connexion with syphilis.

Dr. WILFRED HARRIS showed a case of Syringomyelia with Total Anæsthesia in certain areas. The patient was a man, aged 35 years, who 12 months ago first noticed commencing numbness of the left hand, with difficulty in using the hand. That had steadily progressed ever since. He had had no pain, and had never noticed any unconscious burns or cuts. There was considerable difficulty in using his left hand owing to loss of sensation in the part. There was no muscular atrophy whatever in the hand or limb, and the muscular strength was normal. Well-marked athetosis of the hand was present, especially if the eyes were closed. Hemiatrophy of the tongue was present, the left half being much wasted. There was no weakness of the palate or eye muscles and no nystagmus. There was no weakness of the lower extremities, and the deep reflexes were normal, with flexor plantars. Arthropathy of the right tarsus had been present since early childhood. There was total anæsthesia to touch, pressure, pain, and heat over the left second, third, and fourth cervical areas, including the back of the head and neck from the lower jaw down to the second rib, ending sharply at the middle line. On the right side of the back of the head and neck there was delayed sensation to pain, and a certain degree of analgesia, but tactile sensation there was good. There was no loss of sensation of any form on the right hand or arm, but the loss to pain and heat on the left upper extremity was almost complete, and on the left hand below the wrist there was total anæsthesia to tactile as well as to painful and thermal sensations. Below the navel on the right side of the abdomen at the eleventh dorsal level an area of analgesia commenced, extending down on to the front of the thigh as far as the knee, fading away gradually, involving the eleventh and twelfth dorsal and the first, second, third, and part of the fourth lumbar areas.

Dr. HARRIS also showed a case of Sclerodermia with Hemiatrophy of the Trunk and Left Lower Extremity. The patient was a boy, aged 17 years, who first noticed about five years ago that the skin on the left leg below the knee became pimply and began to break down into ulcers. The leg gradually began to waste, and the condition of the skin had continued ever since to give trouble, being liable to recurrent ulceration. He had never had any pain, but the alteration of the skin on the left lower limb and trunk below the level of the nipples had gradually become more pronounced. No family history of anything similar was obtained. There was marked general atrophy of the muscles of the left leg and thigh, and also of the tissues of the abdominal wall and lower chest as high as just below the nipples (fifth dorsal level). The left half of the body at the level of the navel measured one inch less than the right. Electrical reactions were normal, though diminished. There were marked chronic inflammatory changes and healed superficial ulceration on the skin of the left lower extremity, the changes diminishing in degree above the knee. On the trunk there were definite patches of sclerodermatous change visible on the left side of the front of the lower part of the chest, with numerous small white areas resembling morphœa surrounded by areas of pigmentation. There was no trace of any anæsthesia or analgesia to pain or to heat. The cutaneous changes were visible only on the front of the chest and abdomen, limited sharply to the left side of the middle line, and ceasing just below the level of the nipples. There were no abnormalities in the upper part of the chest, in the left arm, neck, or face.

Dr. F. J. POYNTON showed a case of Mediastinitis, possibly syphilitic in origin. The patient was a man aged 74 years, who was admitted to University College Hospital on Dec. 30th, 1910, complaining of pains over the front of the chest, going through to the back, and conducting down the left arm. Shortness of breath had been present for six months. The pain was gnawing in character and more or less continuous, having no relation to food. Enlarged veins first appeared about three or four years ago on the upper part of the abdomen, and were preceded by a severe pain in that region. Since then they had been gradually increasing in size and distribution, and over the middle of the anterior aspect of the chest had joined into a "capat Medusæ." Dilated tortuous veins extended over the front of the abdomen and chest, also down the left arm—the flow in those over the chest was from above downwards. In both lower limbs there were well-marked varicose veins. Since admission the patient had been treated with potassium iodide. The pain had disappeared for the last 14 days, but more veins had appeared.

Dr. C. W. CHAPMAN and Dr. F. DE HAVILLAND HALL described similar cases.

Dr. HERBERT FRENCH showed a case of Bilateral Paralysis of the Sixth Cranial Nerve with Optic Neuritis following on fractured base of the skull. The patient was a boy, aged 12 years, who presented himself on account of squinting of the eyes associated with severe headaches. It was found that his motor nervous system was natural as regards his body and limbs; his pupils reacted to light and accommodation, and sometimes the axes of the eyes were parallel, though more often there was convergent strabismus, sometimes one eye, sometimes the other appearing to squint the worse. There was complete paralysis of each sixth cranial nerve, the third and fourth nerves being unaffected. Ophthalmoscopic examination showed well-marked optic neuritis in both eyes; the filling up of the physiological cup, the active hyperæmia of the discs and the blurring of their edges being very much more developed in the left eye than in the right. The boy had a scar over the left fronto-temporal region, and upon inquiry it transpired that he had fallen over some banisters in August, 1910, from a height of 30 feet, striking his head in the region of the scar upon a concrete pavement, after which he developed extravasation of blood beneath both conjunctivæ and had almost certainly fractured the base of his skull. It was always possible that in a case of this kind injury to the bones had led to the development of a neoplasm, but in the present instance it seemed much more likely that the fractured base, having been followed by the formation of extensive callus in the region of the basi-sphenoid bone behind the sella turcica, this callus was now either pressing upon or actually including in its substance the long sixth nerves and was also behaving like any other intracranial tumour and producing both severe headache and optic neuritis. As regards the prognosis, the probability was that in the course of months the natural process of moulding of callus would lead to diminution in its bulk and that the optic neuritis would simultaneously subside. Whether or not the sixth cranial nerves would recover would depend upon whether they were actually included in the callus or merely pressed upon. It was possible for a motor nerve to be sufficiently pressed upon to be unable to transmit impulses to the muscles that it supplied without the axis-cylinders of its nerve fibres becoming actually degenerated, in which case, with diminution in the pressure, complete motor power in the affected muscles readily returned; if, on the other hand, the axis-cylinders had degenerated, it was so difficult to maintain the nutrition of the external rectus muscles which could not be efficiently treated by massage or electricity, owing to the difficulty of treating them by the latter methods, that even though regeneration might subsequently occur from the central ends of the motor nerves paralysis of the muscles would persist. This seemed likely to be the case here; in most cases of cranial nerve paralysis from fracture of the skull, however, the prognosis as regards recovery of motor power was good. Two months ago there was cerebral vomiting which had now ceased and the headaches were less severe than they were, so that the callus had presumably become less bulky than it was. It was worthy of special note that in the above case the optic neuritis was very much more marked upon the side upon which the injury to the head occurred.

Dr. FRENCH also showed a case of Aortic Disease with

unusual features. The diagnosis was (?) congenital coarctation. The patient was a girl, aged 10 years, who was found to have a cardio-vascular lesion in the course of routine examination for symptoms other than cardiac. The impulse of the heart was in its normal position—namely, in the fourth left intercostal space in the left nipple line. Percussion detected cardiac impairment of resonance for about an inch out to the left of the nipple line and also for a finger's-breadth to the right edge of the sternum, but not upwards above the third left rib. Although the cardiac impulse was not situated abnormally, it seemed likely that there was an increased transverse diameter of the heart, due very probably to hypertrophy of the left ventricle. This was confirmed by the X ray appearances of the heart. There was no thrill at the cardiac impulse, but over the base there was an extremely well-marked rumbling one, systolic in time, with its maximum intensity not in the second right intercostal space close to the sternum, as would be expected if there was stenosis of the aortic valves, but in the root of the neck behind the clavicular head of the right sterno-mastoid muscle immediately above the inner end of the right clavicle. This rumbling thrill, though felt here with maximum intensity, could also be felt all over both sides of the neck along the course of each carotid artery as high as the angle of the jaw on the right side, not quite so high on the left; also outwards half way to the point of the right shoulder along the course of the right subclavian artery, and similarly to the left along the course of the left subclavian artery, below the left clavicle, as far as the hollow in front of the left glenoid cavity; downwards the thrill, rapidly decreasing in intensity, could be felt close to the right border of the sternum in the first right intercostal space. Corresponding with the thrill there was a rumbling systolic bruit audible all over the thorax, front and back. The point of maximum intensity of this systolic bruit was precisely that of the maximum intensity of the thrill—namely, the root of the neck immediately above the inner end of the right clavicle; it could be heard all along the course of the right subclavian artery, right axillary artery, and right brachial artery, half-way down the right upper arm; along the left carotid artery, up in front of the left ear, and even in the left temporal artery, the bruit here being transmitted higher on the left side than on the right, though in the case of the thrill it was felt higher up on the right than on the left side. The systolic bruit was also quite loud over the left subclavian artery, getting faint in the left axilla, and disappearing in the upper part of the left arm. The child had never had rheumatic fever; she looked sturdy and well-thriven; there was no history of acute rheumatism in the family. There was neither anæmia nor polycythæmia. As regards the diagnosis, it was easy enough to exclude the three commonest varieties of congenital heart disease; with pulmonary stenosis there would almost certainly be cyanosis and clubbing of the fingers, neither of which was present in this case; in addition to which the bruit with pulmonary stenosis was nearly always louder in the second left intercostal space close to the sternum than anywhere else; and although it might be audible over a wide area of the thorax, it was not transmitted into the carotid arteries in the neck or into the arteries in the axillæ and arms. The same argument would serve to exclude perforated septum ventriculorum, the bruit of which, moreover, was always loudest over the lower half of the sternum, particularly at some point between the fourth right and left ribs. The strictly systolic time of the bruit would exclude patent ductus arteriosus, with which the bruit generally ran through systole and diastole with a maximum intensity near the second sound, in addition to which with patent ductus arteriosus the bruit was heard loudest as a rule in the third left intercostal space, near the sternum, and not above the inner end of the right clavicle, as in the present instance. It was conceivable that the patient might be suffering from acquired aortic stenosis, but two arguments against this were, first, that the left ventricle did not appear to be materially enlarged, as it almost certainly would be if there were sufficient stenosis of the aortic valves to produce so marked and widely transmitted a bruit and thrill; and, secondly, with valvular stenosis both the bruit and the thrill would almost certainly have their point of maximum intensity near the inner end of the second right intercostal space, and not above the right clavicle, as in the present instance; nevertheless, that there was stenosis in the aorta seemed clear, and if it was not at the site of the valves it would seem to be in the aorta just beyond the valves. The physical signs did not suggest that the condition was one of ordinary coarctation of the aorta, for this lesion was usually situated beyond the origin of the left subclavian artery, in which case neither thrill nor bruit would be transmitted, one would expect, so far along the right subclavian, right carotid, left carotid, and left subclavian, as was here the case. It was suggested, however, that there might be coarctation of the aorta between the aortic valves and the origin of the innominate artery, and that this was the lesion in the present instance.

Mr. A. E. J. BARKER showed a case illustrating the use of Bier's Bandage for Ununited Fractures. The patient was a man, aged 21 years, who fell off his bicycle in Suffolk on July 24th, 1910, sustaining a compound transverse fracture of the humerus and an external wound of the soft parts. He was dressed by a medical man and advised to go to London. On admission the next day the bone was wired. There were much laceration of the soft parts and periosteum and extravasated blood to a large amount. The fracture ran across the insertion of the deltoid. The wound was almost completely closed. Stitches had to be removed on the second day, as there were much swelling and a rise in temperature. A large quantity of altered blood clot and turbid fluid was let out. After this the temperature fell to normal until the end of the case. Skiagrams showed perfect coaptation. When Mr. Barker returned from his holiday on Sept. 29th there was still a small sinus, and a skiagram showed the ends necrosing. The sinus was split and a small cap of bad bone removed from each end with the wire. A rod of aluminium was placed in the medullary cavity and the ends were pressed together over it. The sinus now began to contract, but there was no sign of union of the bone. On Oct. 18th Bier's bandage was applied for an hour. On Nov. 1st the sinus was soundly healed, but there was still no repair of bone. The elastic bandage was now applied for two hours morning and evening. On Dec. 17th callus was first seen to be forming, and motion between the bones could not be felt as before. By Jan. 1st there was a well-marked mass of callus and the fracture appeared firm. On the 10th the splint was left off. On the 16th the X rays showed good union and perhaps some rarefaction of the upper part of the humerus from disuse. The patient had been encouraged since then to active use of the limb and had had massage applied.—Mr. V. WARREN LOW described similar cases in which he had successfully applied Bier's method.

Mr. P. MAYNARD HEATH showed a case of marked Hypertrophic Arthritis in the Knee of a man.

Dr. F. S. PALMER showed a case of Traumatic Epilepsy.

Dr. J. WALTER CARR showed a case of Epilepsy with Deformity of the Skull.

Dr. J. L. BUNCH showed a case of Rodent Ulcer.

The PRESIDENT showed a case of Multiple Rodent Ulcer and Multiple Epitheliomata of the Face associated with Epithelioma of the Palate.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE.

Yellow Fever.

A MEETING of this society was held on Jan. 20th, Professor RONALD ROSS being in the chair.

Dr. H. E. DURHAM, continuing the adjourned discussion on Sir Rubert Boyce's paper on Yellow Fever in West Africa,[1] criticised severely the administration of the colonial service. He considered that a mild case of yellow fever was liable to be diagnosed as bilious remittent fever.

Sir PATRICK MANSON said that he understood Sir Rubert Boyce considered the best way to exterminate yellow fever was to destroy the stegomyia mosquito, and in that conclusion the society agreed. The other conclusion of Sir Rubert Boyce was that yellow fever was endemic on the West Coast of Africa, and by endemic he meant that the disease occurred in all the principal towns of West Africa. Sir Patrick Manson agreed that yellow fever occurred year by year in West Africa, but he entirely disagreed with the view that the disease was endemic in West Africa.

After Dr. J. W. W. STEPHENS had spoken, Dr. G. C. WALKER (Sanitary Officer, Gold Coast) pointed out that a

[1] THE LANCET, Nov. 26th, 1910, p. 1552.

great deal of yellow fever could be checked if the loose scrub around the towns in West Africa was kept down, because the scrub held so many stegomyia mosquitoes.

After Dr. W. CARNEGIE BROWN had spoken on the question of bilious remittent fever, Professor RONALD ROSS said that the stegomyia mosquito was found all over Africa and yet it was contended that yellow fever was endemic only on the West Coast.

Sir RUBERT BOYCE, in reply, said that his conclusions were summed up by stating that he had brought forward a mass of evidence which showed the almost continuous occurrence of well-recognised outbreaks of yellow fever for the past 100 years, and an unbroken record for the last 20 years; that the natives of West Africa had shown an almost inappreciable death-rate from the disease, whereas amongst the whites the death-rate had varied from 70 to 100 per cent.; that with the immense black population and the very scanty white population the death-rate amongst the whites had been vastly greater than amongst the natives, and that this extraordinary difference could only be explained by the hypothesis of immunity; that the West Indian negroes were susceptible just like the white newcomers; that the natives could get yellow fever—in other words, that the black had no natural immunity against yellow fever; that the explanation of yellow fever in West Africa was similar to that adopted for other countries by the Brazilian, Cuban, French, German, and American official commissions—namely, that the native or indigenous races were the source of the virus, and that as in malaria they harboured the disease in some form; and that segregation afforded complete protection against yellow fever.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

The Treatment of Laryngeal Stricture.—The Diagnostic Value of the Luys Segregator.—The Treatment of Chronic Urethritis by Ointments, and a New Instrument Therefor.

A MEETING of this section was held on Dec. 9th, 1910, Mr. R. H. WOODS, the President, being in the chair.

The PRESIDENT reviewed the history and development of the various methods of treating stricture of the larynx. He showed a patient, aged 5 years, on whom he had performed the operation of laryngostomy nearly 12 months previously for complete cicatricial occlusion of the larynx following diphtheria and laryngo-tracheotomy. The patient's larynx was now quite patent and functioned perfectly during swallowing, but he had not yet decided to close the fistula lest recurrence should take place. He also showed a case of extradural cerebellar abscess and lateral sinus thrombosis, where, in addition to the radical operation on the mastoid, he had tied the internal jugular vein.—Dr. P. DEMPSEY said that the strictures, wherever met with, were not easy to deal with, and laryngeal strictures had always been more or less of a bugbear up to the introduction of laryngostomy. The tubes were unsatisfactory, and in very small strictures it was almost impossible to get any kind of dilating apparatus in from above. He would like to know if the tracheal tube was kept in during the operation, and if the anæsthetic was administered through it. Did Mr. Woods think it would be an advantage to administer a vaccine before such an operation? One of the great dangers was that of sepsis within the first week or so, and possibly a vaccine might prove a preventive. He thought that grafting was a new and good plan. Was one satisfied with the mere incision right down through the strictured part? Did one go through the posterior wall of the cartilage, and, if so, was there any danger of wounding the œsophagus in such cases, and might it not be a good thing to pass a bougie? Did Mr. Woods recommend the leaving of a bridge between the tracheal cannula and the laryngostomy opening? Could he give some idea of the mortality of the operation and the average time it would take an ordinary cases of stenosis from beginning to end? He thought a great many such cases were due to faulty tracheotomies performed in a great hurry and in the wrong position.—Dr. W. MURPHY said that the one thing that struck him was that the surgeon must tell the patient what a wearisome time mechanical dilatation would be, and must himself be provided with infinite patience, but it might be well to try dilatation by mechanical means through the mouth before undertaking a rather serious operation. They wished to know how much of the soft parts inside the larynx ought to be removed. The removal of the false vocal cords had been suggested. In Gluck's operation was there not a danger of having hair growing from the inside of the larynx when the skin of the neck was inturned in closing the laryngostomy wound?—Mr. A. J. BLAYNEY had recently made use of a dose of anti-streptococcic serum. He was much pleased with the results subsequent to the operation, and thought it might be of use in laryngeal cases.—Dr. M. HAYES asked if it would be advisable, in malignant disease of the larynx, to perform such an operation as described so as to form a permanent opening in the larynx for applying irradiation.—Dr. STOKES said he had seen cases where the patient could never do without the tracheotomy tube again. Were these usual cases? How did the vocal cords get on in such cases? It seemed rather drastic to have tin tubes and rubber tubes in one's vocal cords for the best part of a year. Were the strictures usually due to diphtheria, and were they localised in any special part of the larynx?—The PRESIDENT, in reply, said the tracheal tube was kept in, and the child was given chloroform through Junker's inhaler. He had used vaccine in a good number of cases, but he thought it gave uncertain results. In a recent case where he extirpated the larynx of a man he used a vaccine grown from the patient's throat. The operation was not performed for six days after inoculation. The man died from profound sepsis within two days. Within the last three weeks he had excised a cancer, taking away the chief portion of the upper jaw and exposing the base of the skull. He did not depend on any vaccine, but applied a solution of chloride of zinc to the raw surface, and the patient's temperature never rose. As to incision of the cicatrix it was said to be quite enough to cut through the cicatrix, and then depend on the dilatation to cause absorption of the tissue. He did not think that as safe a proceeding as to excise all the cicatricial tissue he could find. It then occurred to him to try the grafting. He did not think a bridge between the tracheotomy and laryngostomy wounds would be possible unless the case was one in which a low tracheotomy had been performed. He believed the mortality was 15 per cent. or 20 per cent. The average time was said to be three to six months, but such a period was much too short for his case. It was 12 months since he had done the child exhibited, and if he took out the tube in six days the larynx would show some slight contraction. They had to wait until all tendency of the cicatricial tissue to contract had disappeared. Unless the false vocal cords were included in the scar they should not be touched—the rule should be to preserve everything that could be preserved. As to hair, in a man he would probably turn the flap up from below the wound; it would be most serious to put growing hairs inside the larynx. The kind of cancer that would likely get any good from X rays would necessarily be a superficial one. He did not think the operation would be much use for the treatment of cancer by radium. In the case shown the vocal cords were involved by the cicatrix and were not visible at all. The child, however, had got good substitutes. Looking at it from below they could not tell it from a perfectly normal larynx. In swallowing not a crumb or drop went the wrong way. He thought the operation showed a very distinct advance in the treatment of such hitherto very unsatisfactory cases.

Mr. R. A. STONEY read a paper on the Value of the Luys Segregator.—Mr. L. G. GUNN had used the instrument and found it difficult to insert; it was often very painful on account of the pressure and the uncomfortable position, and he was not satisfied with the accuracy of its results. It was an excellent instrument with a healthy bladder, but they must be certain that the bladder was healthy, otherwise the results would be falsified. It should be used in conjunction with the cystoscope.—Dr. STOKES had formerly spoken against the instrument, but he had since found that his difficulties were due to his own inexperience.—Mr. STONEY, in reply, agreed with Mr. Gunn as to the uselessness of the instrument in disease of the bladder; but in extensive trouble of the kidney without bladder disease he considered it of very considerable use. It was not to be advocated in opposition to other methods. If too much methylene blue was injected it

would fill the pouch and overflow to the other side and so escape on both sides.

Mr. ANDREW CHARLES, in a paper on the Treatment of Chronic Urethritis by Use of Ointments in the Urethra and Presentation of New Instrument for the application of same, said the ordinary routine of patients injecting aqueous solutions was in many instances fraught with failure, due (1) to inability of the patient to inject effectively; (2) to the fact that the injections had not sufficient time to act; (3) to uncertainty that the solutions were brought into contact with the entire inflamed surface of the urethra; and (4) the glandular orifices might be obstructed with plugs of mucus which did not allow the fluids to penetrate. Oleaginous preparations, according to Janet, adhered to the surface of the urethra, were moulded into the folds, and became incorporated with the mucus and entered into contact with the mucosa, thus permitting a prolonged action of the drug. Lanoline was the best basis as it had the power of taking up aqueous secretions and adhered better to the mucous membrane. Urination evacuated the ointment only in small particles for as long as 36 hours (Finger). The instrument which he suggested for the application of ointments combined mechanical effects, and at the same time applied an ointment effectively to the urethral surface. It possessed the following advantages: (1) simplicity; (2) could be easily cleaned; (3) the urethral surface was completely covered with a large quantity of sterile ointment; (4) the urethra could be massaged on the surface of the instrument, so that the ointment could be forced into the folds of the urethra and into the ducts of the gland; and (5) it acted as a dilator.

UNITED SERVICES MEDICAL SOCIETY.—A meeting of this society was held on Jan. 11th at the Royal Army Medical College, Grosvenor-road, S.W., Colonel Sir David Bruce being in the chair.—Captain W. A. Woodside read a paper on the Training of Territorial Medical Units. He described the general method of training of territorial medical units, dwelling on the various difficulties which were encountered and the methods he had adopted for overcoming them. He strongly advocated that after the first year all privates should devote their chief attention to the special duty for which they were detailed in the duty roster, since there was not sufficient time to teach Territorial privates more than one set of duties. On the other hand, non-commissioned officers should have a general knowledge of all duties. It was very necessary that the adjutant should have a competent knowledge of horse management and he gave illustrations of defective arrangements which had resulted from a lack of this knowledge.—Lieutenant-Colonel C. H. Melville read a paper on the Load of the Infantry Soldier. After a preliminary historical survey of the question he showed that the present weight carried in nearly all armies was too great, the more especially as in war it would have to be carried from the start by reservists out of training. He gave details showing that the limit of weight which could be carried without excessive strain was 22 kilogrammes (48½ lb.), while the British soldier, who was quite lightly loaded compared with the soldier of most other armies, carried 58½ lb. Arms, ammunition, and clothing accounted for 35 lb. of this and could not well be reduced. Any reduction could only be made by lowering the weight of accoutrements, great coat, shelter appliances, and "necessaries." A saving of nearly 2½ lb. could be made by making the water-bottle and mess-tin of aluminium and the straps of thinner material. He considered that a great saving could be made by replacing the great coat (6½ lb.) by a short pea-jacket and a pair of overalls or by making the coat of lighter material. Of the "necessaries" (9 lb.) he would relegate all the cup, cutlery, and small book (total 400 grammes) along with pack (800 grammes) to the second line transport. Clean shirts, towels, soap, and the like were luxuries on service, and expensive luxuries when they were carried at the expense of the fighting efficiency of the soldier.—Surgeon-General Gubbins (Director-General, A.M.S.), Lieutenant-Colonel R. J. S. Simpson, Lieutenant-Colonel J. B. Wilson, Major W. S. Harrison, Major S. Lyle Cummins, Lieutenant-Colonel C. H. Burtchaell, Surgeon-General W. Babtie, Major W. W. O. Beveridge, and Colonel Sir David Bruce took part in the discussion.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Jan. 6th, Dr. Phineas S. Abraham, the President, being in the chair.—The President showed a case of Tylosis, also a case of "Mixed" Leprosy in a male, treated with solid CO_2 with excellent results.—In reply to Mr. W. McAdam Eccles the President said that leprosy had been treated with "606" but without effect.—Dr. Seymour Taylor showed a case of Typhoid Fever with two relapses, and a case of Pneumothorax.—Dr. Frederick Palmer: A case of Acromegaly in a female aged 58 years, and a case of Rheumatoid Arthritis.—Mr. L. A. Bidwell: A case of Removal of the Posterior Part of the Tongue and Epiglottis for Carcinoma and Ileosigmoidostomy for Artificial Anus.—Mr. McAdam Eccles: A case of Cystic Swellings of the Forehead and in the Thyroid Region in a male aged 65 years. The swelling on the forehead he considered to be a dermoid cyst, the thyroid swelling either a cyst of the thyroid or a tubular dermoid in connexion with the thyro-glossal tract.—Dr. T. Grainger Stewart: A case of Pseudo-bulbar Paralysis of Doubtful Origin, probably a case of Disseminated Sclerosis.—Dr. Arthur Saunders: A case of Tuberculous Adenitis in a girl aged 17 years. The diagnosis lay between lymphadenoma and tuberculous glands. Examination of a gland removed for the purpose showed it to be tuberculous.—Mr. N. Bishop Harman: A case of Argyrosis of the Conjunctiva produced in a youth, aged 15 years, by the continuous use of protargol drops over several years; and a case of Tuberculous Kerato-iritis in a woman, aged 21 years, in which injections of tuberculin T.R. were made with most beneficial results; also a case of Posterior Polar Cataract with Persistent Hyaloid Vessels in a youth aged 16 years.—Dr. H. J Davis: A case of Empyema of the Antrum in a boy, aged 7 years, with recovery after three operations; Empyema of the Antrum in a man, aged 71 years, in whom the disease had become malignant and the upper jaw had been excised; a case of Recurrent Post-nasal Growth in a youth, aged 17 years, which occurred after three operations (the growth showed large vascular spaces and adenomatous tissue with small round cells, evidently maligant); a case showing the Stapes in the Oval Window in a woman, aged 25 years, on whom a radical mastoid had been performed for otorrhœa (the malleus and incus were removed, the bone was healed in six weeks, and the patient could hear a watch at six inches).—Dr. Kenneth E. Eckenstein, for Dr. J. F. Halls Dally, gave a demonstration of the Sphygmo-oscillometer, an instrument devised by Dr. Pachon of Paris to estimate the blood pressure.

BATH CLINICAL SOCIETY.—A meeting of this society was held on Jan. 6th, Mr. F. Lace, the President, being in the chair.—Dr. A. J. B. Leckie showed a case of Primary Carcinoma of the Liver in a girl aged 6 years (confirmed post mortem). The weight of the liver was 87 ounces.—Mr. Forbes Fraser showed a specimen of an Ovarian Dermoid which had ruptured into the peritoneum. It was attached to the sigmoid flexure by a tubular connexion about one and a half inches in length. The cyst contained foul-smelling fæcal material and vegetable débris, the remains of fruit skins, seeds, orange-pips, &c., being recognised.—Dr. J. Wigmore read notes of two cases of Cæsarean Section and discussed the indications for craniotomy, symphysiotomy, pubiotomy, and Cæsarean section.—Dr. Charles J. Whitby read a paper on the Cancer Problem in the Light of Recent Research. He said that the importance of the cancer problem was enforced by the estimation of Dr. Bashford that the chance of a man over 35 years of age dying from cancer was 1 in 11, and of a woman 1 in 7. He referred to the results of recent researches which seemed to confirm the rationality of treatment by radium and the X-rays, and remarked that it would be premature to apply the results of experimental immunisation to man until such time as definite effects could be produced in animals upon growing vascularised tumours of spontaneous origin as distinguished from recently introduced transplanted growths.

CLINICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on Jan. 17th, Mr. J. Howson Ray, the President, being in the chair.—An address, entitled "The Life-history, Function, and Inflammation of the Appendix," was delivered by Mr. Edred M. Corner. He dealt in the first instance with the physiology of digestion, and detailed the various steps in the process

until the food arrives in the ileo-cæcal region. He laid stress on the fact that in this region of the alimentary tract bacteria were more numerous than at any other part, and discussed their influence in the production of appendicitis. He also drew attention to the part played by foodstuffs. The function of the appendix he dealt with at some length and gave three examples of those cases which he designates as "unconscious and unrecognisable appendicitis."—Dr. H. R Hutton proposed, and Mr. A. H. Burgess seconded, a vote of thanks, to which Mr. Corner suitably replied.

Reviews and Notices of Books.

The World of Life: A Manifestation of Creative Power, Directive Mind, and Ultimate Purpose. By ALFRED RUSSEL WALLACE, O.M., D.C.L., F.R.S. London: Chapman and Hall, Limited. 1910. Pp. 408. Price 12*s.* 6*d.* net.

THE name of Alfred Russel Wallace is greeted with affection and respect by all directly interested in the progress of science, though many are at absolute variance with him in some of his views. A large reading public doubtless will hasten to make themselves acquainted with the latest message of this veteran in science who just a few days ago completed his eighty-eighth year, and who happily has proved his vigour and force of intellect by being able to "summarise and complete his half-century of thought and work on the Darwinian theory of evolution," now presented in "The World of Life." He, however, goes far beyond Darwin: in fact, he asserts that he purposely undertook a popular and critical examination of those fundamental problems which Darwin expressly excluded, such as the causes of life itself and its more fundamental and mysterious powers—growth and reproduction.

After painting in picturesque language the structure of a bird's feather, the marvellous transformation of the higher insects, and the elaborate wing-scales of Lepidoptera, he tries to show the absolute necessity for an organising and a directive life-principle in order to account for the very possibility of these complex outgrowths, and contends that they necessarily imply a creative power, next a directive mind, and an ultimate purpose. And what is this purpose? The development of Man, the one crowning product of the whole cosmic process of life-development, the only being which can appreciate the hidden forces and motives everywhere at work, and can deduce from them a supreme and over-ruling Mind as their necessary Cause.

The author sees in the remarkable series of events he records in the process of evolution, a creative effort carried on from the beginning of time by an active, creative, conscious spirit with one object, the perfection of man and his spiritual development—as he puts it, "the earth and organic nature having been designed for the development of the human race." The final outcome of all the marvellous cosmic and other changes in geological time and the purpose of the whole series of living beings were in this view to serve the uses and to add to the enjoyments of man—a doctrine which, he admits, is highly distasteful to a large proportion of scientific workers. It is a strange philosophy: all had but one object—the perfecting of man and his spiritual development. Everything on earth and in the sky, the birds of the air, the beasts of the field, the gorgeous insects and the flowers, the minerals in the earth, and the varied products of the vegetable kingdom, "the earth veil" of Ruskin, that omnipresent clothing of the earth's surface produced by the infinitely varied form of vegetation, all were created for man's profit, use, and delectation, and to provide a spiritual school for man. Man is the centre round which turns the whole of this elaborately evolved universe—"this earth, with its infinitude of life and beauty and mystery, and the universe in the midst of which we are placed, with its overwhelming immensities of suns and nebulæ, of light and motion, are firstly for the development of life culminating in man; secondly, as a vast schoolhouse for the higher education of the human race in preparation for the enduring spiritual life to which it is destined."

Leaving aside these ulterior aims, let us glance at the author's text itself, apart from his views on design and on the present as a preparation for a future spiritual state. He sets forth in charming and picturesque language, with a delight and freshness almost boyish in its earnestness, a popular account of the story of evolution, insisting on the co-relation and co-adaptation between the development of the vegetable and animal life through the whole geological period up to the present. Beginning with the question, What is Life? he gives what he calls a tolerably complete definition of life as "that power" which does certain things. With Haeckel's dislike of the dogmas of theologians, he will, however, have none of the Haeckelian philosophy. About one-quarter of the book is taken up with the consideration of species, their numbers, variety, and distribution, much emphasis being placed on variability, on the detailed distribution of plants—British, temperate, and tropical floras—and the wonderful adaptations of some plants to seasons of drought. When considering the distribution of animals, birds and bird-life seem to fascinate the author. He calls birds the most familiar, most beautiful, and the most wonderful of living things, the most specialised of all the higher animals, and, so far as perfection of organised structure is concerned, considers them to hold a higher place than the mammals themselves.

The story of Darwin's conception of "Natural Selection," dependent on heredity, variation, and enormous power of increase of plants and animals, is told with graphic detail and plentiful illustration, including an account of a flight of pigeons 240 miles in length and composed of 2000 millions of these birds, as narrated by Wilson. A similar story is told of the migrations of the lemmings of Norway. "Mutation" and "Mendelism" are ruled out of court as hopelessly inefficient and ludicrously inadequate as substitutes for the Darwinian factors in the world-wide and ever acting process of the preservation and continuous adaptation of all living things. The author waxes eloquent and writes with zest on the theme that the entire animal world depends absolutely on the equally vast and varied vegetable world for its very existence, and that the variety of insect tribes depends on the overwhelming variety of plant species. At last he finds a use for mosquitoes as the food of birds, especially birds that breed in the Arctic regions. A new significance is also found in the colour of nuts. The wonderful co-adaptation of birds and insects leads to a very interesting account of "recognition marks," which are of great importance—perhaps absolutely essential—in the evolution of new species, and in this he gives us a most interesting review and criticism of colour in all its varied relations. In his "Extensions of Darwinism" he has a good word for Weismann's theory of "Germinal Selection"; but here he runs off at a tangent against certain capitalists and legislators, which he calls "a digression." His general conclusion, reiterated as to life-development, is that "beyond all the phenomena of nature and their immediate causes and laws there is 'Mind and Purpose,' and that the ultimate purpose is (so far as we can discern) the development of mankind for an enduring spiritual existence." Our great cities are the "wens," the disease-products of humanity, and until they are abolished there can be no approach to a true or rational civilisation according to the author's thesis that to explain all the phenomena of the whole world

of life we require to postulate the continuous action and guidance of higher intelligences, and that these have probably worked towards a single end, the development of intellectual, moral, and spiritual beings.

Instead of playing the part of critic, we have let the author speak for himself. If we do not wholly agree with his anthropocentric view of creation, and to many it will appear as if the very essence of the idea of evolution is at least greatly minimised thereby, we are none the less charmed with this very readable and delightful book as a popular account of the course of evolution.

Diseases of the Joints and Spine. By HOWARD MARSH, M.A., M.C. Cantab., F.R.C.S. Eng., Master of Downing College and Professor of Surgery in the University of Cambridge; Consulting Surgeon to St. Bartholomew's Hospital and to the Hospital for Sick Children, Great Ormond-street; Corresponding Member of the Orthopædic Association, New York. Third edition, enlarged and revised by the author and by C. GORDON WATSON, F.R.C.S. Eng., Surgeon to the Metropolitan Hospital; Assistant Surgeon to St. Bartholomew's Hospital and to St. Mark's Hospital for Fistula. With four coloured and eight black and white plates, and over 100 illustrations in the text. London: Cassell and Co., Limited. 1910. Pp. 632. Price 10*s.* 6*d.* net.

SINCE the second edition of this work appeared many advances have taken place in the knowledge and understanding of the various forms of septic arthritis, and in consequence of the application of the X rays to diagnosis and the addition of vaccine therapy to methods of treatment a great deal of new material has accumulated. To make way for the additions and revisions which have been thus called for, without too greatly increasing the size of the volume, some of the case narratives have been omitted. But, as in previous editions, the volume is still a record from the clinical standpoint of the personal experiences of the author, with especial reference to those methods of treatment which in his hands have seemed to be best suited to the various conditions with which he deals.

Within the compass even of 632 pages it is impossible fully to discuss the principles and practice of the treatment of the numerous subjects included, and many excellent methods of treatment are therefore not noticed. The various affections are discussed in the first 15 chapters in a general way, and afterwards in chapters XXIII. to XXX. each joint is considered separately in regard to the affections to which it is most liable. Special chapters on ankylosis, excision of joints for tuberculous disease, interosseous pressure in joint disease, bone-setting, and movements and massage are instructive and interesting, enunciating principles and expressing views of the most approved kind, and full of sound practical suggestion. We would draw attention particularly to the chapter on interosseous pressure in joint disease, where the correct principles of treatment by extension with weight and pulley are laid down in a manner both forcible and convincing. A confusion of terms and ideas has been corrected by the proper and up-to-date classification of the many different pathological states which in the loose phraseology of every-day practice go under such names as rheumatic gout, chronic rheumatic arthritis, &c. The paragraphs on the pathology of some of the secondary forms of arthritis and the chapter on congenital dislocation of the hip-joint cannot be said to be quite up-to-date, and the radiograph of the latter condition on a plate facing page 472 has not been taken with the object of exhibiting the length and direction of the femoral neck, a circumstance which deprives the photograph of some of its practical value. Diseases of the spine are comprised in 74 pages, forming Part II. of the volume, dealing with tuberculous and malignant disease, spondylitis deformans, and neurotic spine. It will therefore be seen that this forms a very small portion of the work.

The book is a record of Professor Howard Marsh's experiences, contains the details of many interesting cases, each with its point of instruction in diagnosis and treatment, and will be found of great practical value to the surgeon.

Manual of Diseases of Women. By W. E. FOTHERGILL, M.A., B.Sc., M.D. Edin., Assistant Gynæcological Surgeon, Royal Infirmary, and the St. Mary's Hospitals, Manchester; Clinical Lecturer in Obstetrics and Gynæcology in the Victoria University of Manchester. With 144 illustrations in the text. London and Edinburgh: William Green and Sons. 1910. Pp. 433.

THE principles upon which the author has written this manual are well stated by him in the preface. "The life-history of the female reproductive organs is characterised by a period of rest following the time of early development, by a second period of development at the commencement of their functional life, and by a period of retrogression at its close. In addition to these developmental crises the organs are the seat of changes occurring in monthly cycles, and generally also of more extensive changes involved in actual reproduction at varying intervals. The border-line between health and disease is crossed in structures that are undergoing rapid tissue change far more often than in those in which construction, destruction, and reconstruction are more slow and gradual."

In every woman of reproductive age tissue changes occur every month which are so extensive and so rapid that they have no parallel in the whole life-history of the male subject. It is this difference which underlies the distinction between "the diseases of women" and all other branches of medicine. In this book, after a preliminary section dealing with methods of examination and diagnosis, the actual diseases are considered under: Errors of Development, Circulatory Changes, Mechanical Conditions and Injuries, Results of Infection, Progressive Changes, and Retrogressive Changes.

The first section on errors of development is illustrated by some good diagrams. In considering circulatory changes and pelvic congestion resulting therefrom Dr. Fothergill lays stress upon the important fact that, by many authors, chronic venous congestion, hypertrophy, and subinvolution are all classed together with chronic infection under the erroneous and misleading term "endometritis." In the same way in many text-books of gynæcology the grave mistake is made of asserting that the pain in the sides due to chronic pelvic congestion is due to ovaritis, a disease much more often talked about than seen. We need not say that the author strongly condemns such errors as these, leading, as they do, to a misconception of the real condition, and often to meddlesome and harmful treatment. Young girls constantly have ovarian pain, but true ovaritis in such patients is almost unknown.

In the chapter dealing with Mechanical Conditions and Injuries Dr. Fothergill supports the view that the firm attachment of the uterus, vagina, and bladder is effected mainly by the connective tissue sheaths surrounding the vessels, nerves, and lymphatics of the pelvis. This hypothesis appears to us to represent only a part of the truth, and we cannot accept the view that any one portion of the pelvic floor plays the only, or indeed the main, part in supporting the pelvic viscera. We see no difficulty in accepting the more general view that all the component parts of the pelvic floor take their share in anchoring the pelvic viscera in their places, and among those structures the connective tissue sheath of the vessels is no doubt of great importance. Is not the fact that women who have the perineum torn right through practically never have uterine prolapse explained not by the reason the author gives—namely, that rupture of

the perineum and levatores ani is not a cause of prolapse—but rather to the fact that when such extensive tears occur the tissues are not only saved thereby from undue stretching, but also such extensive tears are usually sewn up very carefully? In cases of retroversion and prolapse of the ovaries where operative treatment is necessary the operation is described and advised of drawing the folded round ligaments through an opening in the broad ligaments and suturing them in front of the uterus, thus forming a sling to hold up that organ. Dr. Fothergill states that he has had good results from this procedure.

The arrangement of this manual presents a refreshing novelty, and the manner in which the different diseases are treated of is good and interesting. It contains a large amount of sound teaching in a comparatively small compass and is well worth reading. The classification adopted naturally leads to the inclusion of some conditions under headings in which we would not expect to find them; thus, for example, a vascular caruncle is described in the section on retrogressive changes. It is quite true that one form of caruncle owns this origin, but the common form due to gonorrhœa should be found rather in the chapter on diseases due to infection. The illustrations are good and the index fair.

The Diseases of the Nose, Mouth, Pharynx, and Larynx: A Text-book for Students and Practicians of Medicine. By Dr. ALFRED BRUCK (Berlin). Edited and translated by F. W. FORBES-ROSS, M.D. Edin., F.R.C.S. Eng., assisted by FRIEDRICH GANS, M.D. Illustrated. London: Rebman, Limited. 1910. Pp. 615. Price 21*s.* net, cloth.

THE translators of Dr. Bruck's text-book state in their preface that they "have endeavoured as much as possible to closely follow the German text; even at the risk of not producing 'classical English' at the expense of the exact 'shade of meaning' or sense which the author originally endeavoured to convey." Unfortunately, it does not seem to have occurred to them that "to closely follow the German text" would actually run them into the very danger they were so anxious to avoid, and that it is possible to translate so literally as to render an author's original "shade of meaning" hopelessly obscure. Indeed, we regret to say that this is actually what has happened. Take the following as an example: "This" (limitation of the olfactory region in the human nose to a small area) "can be taken as a proof of the little delectable fact that the sense of smell in Homo sapiens is on a retrograde movement, or seems to degenerate entirely, in contradistinction to his animal affinities." From this sentence the reader may learn "the little delectable fact" that the translators have performed their task upon the all-too-familiar lines of the fourth form construing the Commentaries of Julius Cæsar.

It says much for Dr. Bruck's writing that many of its merits have survived this treatment. His arrangement of the subject-matter, for example, is clear and systematic, and much of his description retains its pithy and concise character. We commend, among other admirable features, the decision which led the author to incorporate in his book a section upon diseases of the mouth. In this connexion, however, we were unable to discover any allusion to pyorrhœa alveolaris, a disease which plays a not unimportant rôle in the causation of many disorders of the nose and throat.

In his advocacy of caution in regard to the operative treatment of nasal sinus suppuration Dr. Bruck's teaching is in harmony with the most recent movement of rhinological opinion. But we are constrained to add that in many other directions his views and counsels are not so commendably up to date. It will be noted with surprise, for instance, that not only does he advise the alveolar puncture in maxillary antrum suppuration, but that he actually permits the sacrifice of a sound tooth if necessary for the accomplishment of this measure.

The handling of the details of the etiology, symptomatology, and medical treatment of the various diseases is, in general, careful and complete; but too little space for a volume of this size has been given to the description of operations. Here, also, we are disappointed to find that several recent developments do not receive an amount of attention commensurate with their popularity. Submucous resection of the nasal septum, for example, is dismissed in 21 short lines.

As a suitable anæsthetic in operating for the removal of adenoids Dr. Bruck recommends ethyl bromide, a compound which few English anæsthetists would care to use, for certain good and sufficient reasons.

The volume is well bound and presents a handsome exterior. The illustrations are many and useful, and there is a fair index. So that, on the whole, we may say that if the "practician" is able to ignore the uncouthness of the translation he will find Dr. Bruck's text-book of some value.

Dental Surgery and Pathology. By J. F. COLYER, M.R.C.S. Eng., L.R.C.P. Lond., Dental Surgeon to Charing Cross Hospital and the Royal Dental Hospital. Being the third edition of "Diseases and Injuries of the Teeth," by MORTON SMALE and J. F. COLYER. London, New York, Bombay, and Calcutta: Longmans, Green and Co. 1910. Pp. 1000. Price 25*s.* net.

THE great advances made in the study of general pathology have naturally influenced the study of special departments of medicine and surgery, and the pathology of the teeth has participated in the general progress. The text-book of "Diseases and Injuries of the Teeth," by Mr. Morton Smale and Mr. J. F. Colyer, achieved no small measure of popularity, and now Mr. Colyer has written the work before us which appears practically as the third edition of the book we have mentioned. It has been the aim of the author to describe the most modern aspects of dental pathology and to describe the treatment of the morbid affections of the teeth as based on our present knowledge of the etiology and pathology of dental disease. In this work the author has been fortunate in obtaining skilled assistance in certain special departments; thus Mr. H. S. Clogg has assisted in the preparation of the chapter on tumours of the jaw, a subject too little regarded in many text-books on dentistry. The importance of this matter will only be fully appreciated by considering the fact that the dental surgeon is often the first trained observer who has an opportunity to examine the interior of the mouth soon after the appearance of a new growth, for the patient naturally is inclined to ascribe the pain to some dental condition. Therefore it is essential that every dentist should be capable of recognising and appreciating the importance of the earliest manifestations of new growths. This chapter is well written and should prove of value to the dental student.

Mr. Kenneth W. Goadby has completely rewritten the chapter on the bacteriology of the mouth, and all medical authorities are now agreed as to the immense importance of septic oral conditions on the general health. All morbid processes in the teeth react on the general health, and probably the most important of these is that which is most commonly known amongst medical men as pyorrhœa alveolaris, but Mr. Colyer prefers to call it chronic general periodontitis. He considers that the initial cause in the majority of instances is an injury to the tissues of the interdental stratum by fermenting food and other decomposing débris. Infection with pathogenic organisms rapidly follows, and the author holds that the chronic character of

the process is one of slow tissue necrosis rather than acute inflammation, and that the disappearance of the alveolar margin is due to the action of toxins which are formed in the pockets around the teeth. He believes that the tissues round the alveolar process are unduly liable to attack on account of a lack of functional activity the result of inefficient mastication, and he considers that the calculus on the teeth is a product of the discharge from the teeth sockets, and that it does not affect the disease beyond interfering with the cleansing of the pockets round the teeth.

A list of the papers which have been found useful in the preparation of the work has been added to many of the chapters, in order that anyone desiring to study specially that particular subject might be able to refer easily to the authorities. Many illustrations are supplied, in all nearly 900. They are well selected and clear.

The book is primarily intended for the student and practitioner in dentistry, but there is much in it that should prove of interest and value to the medical practitioner, and, indeed, it would be desirable if practitioners of medicine knew more than they usually do of the affections of the teeth, for they would be in a better position for recommending their patients to apply for the assistance of a dentist when necessary. Only too many members of the public are under the impression that there is nothing the matter with a tooth unless it aches. We can speak with confidence in praise of the book, and we hope that the success which it merits will be attained.

Popular Drugs: their Use and Abuse. By SIDNEY HILLIER, M.D. Edin. London: T. Werner Laurie. Pp. 192. Price 3*s.* 6*d.* net.

WE learn from a note on the loose cover of this work that "it is the object of this book to give in popular form some account of the legitimate sphere of this class of drugs (i.e., those leading to a drug habit) to show the dangers of excess, to point out some of the preventive measures against excess, and the best and most modern methods of treatment." As a rule, we think that popular books on medicine do more harm than good, for they lead the lay reader to put a confidence in his own judgment which is but rarely justifiable. However, if a popular book on medicine or medical matters is to be written, it is better that the author should be a medical man than that the book should be written by a "health lecturer" or a school teacher.

Dr. Hillier deals first with alcohol, and then successively with tea, coffee, cocoa, opium, tobacco, Indian hemp, mescal, cocaine, hypnotics, analgesics, and patent medicines. The remarks on alcohol are in general characterised by soundness, though here and there we note inaccuracies. For instance, we do not think it correct to say "Sherry contains 23 per cent. of alcohol" without some modification, for there are some sherries which do not contain anything like this amount. Neither is any information given as to whether the alcohol is calculated by weight or by volume, and for the purposes of comparison it should be one or the other, not both. On p. 65 we note a dietetic regulation with which we cannot agree, where Dr. Hillier says that for a gouty person well-kept fine quality Bordeaux, freely diluted with an alkaline mineral water, is permissible. The dilution should certainly be done in the stomach and not in the tumbler—that is to say, the water should first be drunk and then the "fine quality Bordeaux" can be enjoyed in the ordinary way. Not enough stress is laid on the difference between the effect of ethylic alcohol and that of the vinous ethers which are found in good wines and brandies. Ethers are valuable as stimulants.

In speaking of tea Dr. Hillier says (p. 102): "Hard water does not make good tea ..... a pinch of bicarbonate of soda should be added before the tea is introduced. Soft water extracts more of the soluble principles of the leaves." If a hard water is used much of the tannin is thrown down in the form of tannate of lime, and probably caffeine is set free from its combination and in the free state it may be mischievous. Bicarbonate of soda may do the same thing.

Dr. Hillier's remarks upon self-drugging, hypnotics and patent medicine are good, but the public at large is so silly as regards its health that so long as hypnotic drugs are allowed to be sold freely over the counter, and so long as every kind of quack remedy is advertised in papers and magazines, for so long will weak-minded persons continue to ruin their health and waste their money. We are in accord with Dr. Hillier's remark that the question as to whether drugs are to be condemned "entirely depends on whether their use is regulated and controlled by knowledge or by ignorance."

Dr. Hillier has approached the various subjects indicated from the excellent standpoint of common sense.

Traité Pratique d'Électricité Médicale. By Dr. J. LARAT. Paris: Vigot Frères. 1910. Pp. 641. Price 10 francs.

THIS is the third edition of a handbook on medical electricity by Dr. Larat of the Hôpital des Enfants Malades of Paris. The chapter on electro-diagnosis is very complete, and is well illustrated by tracings of the actual curves of muscular contraction. The curves of normal faradic and galvanic excitation respectively are of great interest. They are obtained by means of Dr. Larat's apparatus for graphic electro-diagnosis, which consists of a revolving drum, on which are recorded the muscular contractions by means of a tambour as is usually done in the physiological laboratory. This is an ideal method of recording the comparative excitability of the same muscle on the sound and on the affected side, but is too complicated to be used in ordinary hospital routine. Bergonié's charts are commended for registering the results of muscle testing, and if this is done in two colours, red for the make and blue for the break, no better scheme could be devised.

In a later division of the book Dr. Larat has coined a new term, Electro-clinique, which includes all methods of electrical treatment. In the article on uterine fibroma he states that he has totally given up Apostoli's and Tripier's methods in favour of the treatment by Roentgenisation, with which he has obtained encouraging results. As might be expected from a work by the author, it is very much up to date, for Dr. Larat is in the van of modern electrical medicine. For instance, in the article on the treatment of adiposity we find reference to Guilleminot's method by galvanic currents of high intensity and to Bergonié's excellent results by the faradic current, or by rhythmic galvanism. The author is also a great advocate of the hydro-electric bath, which he uses with effect for gout and obesity, while among other therapeutic points we may notice the use of high-frequency sparking in the treatment of varicose ulcer, and the introduction of salicylic ions in rheumatic affections of the joints. The article on paralysis is very long and gives the result of the author's large experience. It is perhaps the section best worth studying of all in the book.

There are a few misprints, but the illustrations are numerous and well chosen, and there is a most excellent index.

The Encyclopædia of Sport and Games. Vol. I. Edited by the Earl of SUFFOLK AND BERKSHIRE. London: William Heinemann. 1911. Pp. 496. Price 12*s.* 6*d.*

THE first volume of this admirable encyclopædia covers the space between aeronautics to cricket, and the title of the very first article indicates how wide the meaning of the word "sport" is now to what it was ten years ago, when the original edition of this encyclopædia was

issued. To-day, as the editorial preface says, artificial locomotion on the land and in the air has made such giant strides and become so much a subject of competition and emulation that there cannot be any further doubt of its proper place in an encyclopædia of sport. The article on aeronautics is written by Lord Montagu of Beaulieu, editor of *The Car*, and one of the earliest and most expert motorists in the kingdom. It is a highly interesting and readable summary of aerostatics, to which is appended a bibliography ranging between 1784, the days of the exploits of M. Blanchard and M. Lunardi, to the numerous accounts of flying machines which have appeared recently since M. Santos Dumont's story of his airships was published in 1904. The article is profusely illustrated with reproductions from photographs depicting, for instance, M. Blériot's arrival at Dover on July 25th, 1909; Messrs. Latham and Farman flying at Blackpool; Mr. Wilbur Wright (whom Lord Montagu regards as the first successful inventor of a flying machine fitted with an engine); the Comte de Lambert and M. Gobron; M. Paulhan winning the London to Manchester contest; and all forms of balloons from the Montgolfier machine, which made ascents in August, 1783, to Zeppelin II. in full flight over Lake Constance and the first flight of the new Russian airship Russie. Among other articles there is a symposium upon atheletics, to which past champions like Mr. C. L. Lockton, Mr. C. B. Fry, Mr. M. Shearman, and Mr. H. Wade contribute. Billiards and coursing are the subjects of exhaustive contributions. There is much talk of fishing and shooting under such alphabetical heads as big game, bison, bear, black game, bass, bream, chubb, carp, conger, and River Conservancy. Cricket is dealt with under subheads, which can be easily guessed, by the Jam of Nawanagar, Mr. F. G. J. Ford, Mr. T. Richardson, Mr. B. J. T. Bosanquet, and Mr. M. C. Kemp, Mr. W. J. Ford being general editor. The encyclopædia is profusely illustrated with reproductions from photographs, with line engravings and diagrams, and contains also eight finely coloured prints. The work is sure to appeal to many of our readers; automobilism, fully dealt with here by Lord Montagu of Beaulieu, is now regarded by many medical men as part of their necessary technical education, while there are few of us who have not some form of sporting pursuit.

LIBRARY TABLE.

Practical Physiological Chemistry. By R. H. ADERS PLIMMER, D.Sc., Assistant Professor of Physiological Chemistry, University College, London. With coloured plate and other illustrations in the text. London: Longmans, Green, and Co. 1910. Pp. 270. Price 6*s.* net.—Dr. Plimmer has given us in this book a clear and attractive account of the practical side of physiology. His experience as a physiological teacher has endowed him with the faculty of presenting facts in logical sequence and in simple terms. He knows exactly the essentials of the subject for the student and he has carefully guarded against overloading his account of laboratory applications with general considerations. In a word, he has successfully written of essentials within the due limits of a handbook. The following is worth quoting as a very good example of what the American would call "straight" writing. Under the heading of "Life Cycle of the Elements," the section in which it occurs contains this preliminary paragraph: "During the life processes of animals and plants an interchange of inorganic into organic and of organic into inorganic compounds occurs. The change of inorganic into organic is effected by the plant from the carbon dioxide of the atmosphere, ammonia and salts in the soil. The change of organic into inorganic is effected by the animal. The organic compounds synthesised by the plant enter the animal as food, and are converted into carbon dioxide which leaves the body by the lungs, salts, urea, and other simple organic compounds which leave the body in the urine. The fæces contains matter which has not been utilised by the animal. The urea and the other organic compounds in the excreta are finally broken down into carbon dioxide, ammonia, &c., by bacteria. There is thus a complete life cycle of the elements." What a great and forcible story is indicated here in a few words. The practical directions to the student are excellent throughout and the book altogether may be commended with the greatest confidence.

Gall-stones and Diseases of the Bile-ducts. By J. BLAND-SUTTON, F.R.C.S. Eng., Surgeon and Lecturer on Surgery to the Middlesex Hospital, and Member of the Cancer Investigation Committee. New and revised edition. With 53 illustrations. London: James Nisbet and Co., Limited. 1910. Pp. 256. Price 4*s.* 6*d.* net.—We were able to speak favourably of the first issue of this book, and we find that this revised edition presents clearly the advances which have been made during the five years that have elapsed since the first appearance of the work. Mr. Bland-Sutton considers that the opinion which was formerly generally held, and is still held by many, that many diseases associated with gall-stone are due to infections ascending the bile-ducts from the alimentary canal is false, and he maintains that many septic diseases of the bile-duct are caused by infection from organisms eliminated from the blood of the portal circulation and discharged into the outgoing bile; thus, according to his view, most of the disturbances which come under the surgeon's hand in connexion with the biliary passages are "descending infections." This opinion is certainly gaining credence, though perhaps it is expressed a little dogmatically here. Within recent years we have learned that malignant disease of the gall-bladder is more frequent than used to be thought, and the author considers that the association of cancer and gall-stones indicates that these two conditions are manifestations of a common cause, and he believes that this association strengthens the position of those who believe that cancer is due to a micro-parasite, probably taken into the alimentary canal with food and water. The book is very suggestive of the originality of its author and is well worth reading. The illustrations are excellent, as they always are in any work by Mr. Bland-Sutton.

Hay Fever and Paroxysmal Sneezing (Vasomotor Rhinitis). By EUGENE S. YONGE, M.D. Edin. Edinburgh and London: William Green and Sons. 1910. Pp. 150.—Those who are acquainted with Dr. Yonge's previous publications have learned to expect that whatever comes from his pen will be both scholarly and readable. To expect also novelty when such well-worn subjects as hay fever and its congeners form his theme is, perhaps, to ask too much. Although, however, the author has broken but little new ground, the book, as a handy compendium of views on the whole subject, thoroughly deserves a prominent place in the practitioner's library. There are only two minor details upon which we desire to utter a word of criticism. Dr. Yonge very properly devotes a considerable amount of space to the important matter of the treatment of hay fever, but in our opinion he would have considerably enhanced the value of this section if he had discriminated rather more clearly and emphatically between the less and the more successful methods. The other point is, that his warm support of the treatment of paroxysmal rhinorrhœa by shaving off the septal tubercles does not, as far as we are aware, represent the opinion of rhinologists in

general. The coloured plate which is supplied to illustrate this operation is, by the way, not very educative.

Indiscriminate Spitting and the Prevention of Consumption. By C. CONYERS MORRELL, L.R.C.S. Edin. London: W. Speaight and Sons. 1911. Pp. 16, paper. Price 2*d*.—Any paper forcibly and yet sensibly written on this subject for the enlightenment of the public is worthy of commendation. This is such a paper. The author shows a broad grasp of first principles when he writes that it is the unquestionable duty of every priest and minister, of every statesman and every public man, to study and understand the doctrine of infection and proclaim the fundamental principles of prevention and the necessity for their observance.

JOURNALS AND MAGAZINES.

The North American Review.—The January issue contains a plea by Olivia Howard Dunbar for the State acknowledgment and fulfilment of the duty of guardianship to the child. She points out how for the past 25 years or more, whether as scientists, as artists, or as sentimental amateurs, we have been more or less profitably engaged in "studying the child," as a result of which many "wise effective agencies," that will in time be greatly multiplied, are already in operation. The work of the New York City Department of Child Hygiene, under the direction of Dr. Josephine Baker, the child labour committees, the juvenile courts, the tendency to substitute outside family boarding for orphanages and children's homes, are all reviewed, and the article concludes with a statement of the purpose of the Child Welfare Exhibit, being held in New York City during the current month. As a result of an investigation of child-life in New York a display of various conditions affecting child-life and health, with the deductions to be drawn therefrom written very large and conspicuous indeed, in the manner of recent years rendered familiar by the tuberculosis exhibitions, is endeavouring to reach the untrained mind that is too indolent or too weak in its mental digestion to assimilate any but predigested food. A Bill, it appears, is now before Congress recommending the formation of a Federal Children's Bureau under the Department of the Interior. In other articles in the same issue of a magazine that is always interesting, John Brown of American fame is painted respectively as "if no saint, always a hero and a martyr," by W. D. Howells, and as an "assassin" and a "death dealer," "without a gleam of human love or pity for myriads of his own race, his countrymen who happened to have been born and to have lived south of the line of Mason and Dixie," by Henry Watterson; Max Eastman tells us why woman suffrage is important; under the heading of Personalities and Political Forces, Albert Bushnell Hart stumps for Roosevelt in the Presidential campaign of 1912; and "Britannicus," writing in the midst of the battle of the recent British elections, arrives at the sane conclusion "that the tremendous issues now confronting the British people cannot be permanently settled except by consent."

Edinburgh Medical Journal.—The January number of this journal opens, so far as original matter is concerned, with a paper by Professor F. M. Caird on Epithelioma of the Tongue, based on a review of 60 hospital cases. Sixteen patients are still alive. The writer recommends local anæsthesia for the first part of the operation. In an opening address before the Edinburgh Obstetrical Society Dr. F. W. N. Haultain discusses the comparative progress of midwifery and of gynæcology, the former remaining almost *in statu quo*, while the latter has made great strides. Mr. David M. Greig writes on Recurrent Enlargement of the Salivary Glands, a condition little noted in text-books. It seems sometimes to be a sequel of mumps and may be due in some cases to obvious affection of the duct, whereas in others its causation remains quite obscure.

The Dublin Journal of Medical Science.—A moderate and unbiased discussion of the physiological effects of alcohol is so seldom encountered that one must record the appearance of a paper answering to this description almost with astonishment; yet such seems to be the nature of Dr. W. H. Thompson's contribution on the subject to the December number of this magazine. It is, however, rather short and sketchy. In the same issue is published an interesting address by Professor E. J. McWeeney on Some Tendencies of Modern Research in Veterinary and Human Medicine, in which, among other things, attention is called to the existence of ultra-microscopical infective agents and to Borrel's view that some forms of epithelioma may be due to such a virus, carried perhaps by the parasite Demodex folliculorum.

The Medical Chronicle.—In the January issue of this journal Dr. W. B. Warrington discusses the diagnosis and prognosis of traumatic neurosis, and notes the difficulty met with in many cases in which the best form of treatment demands that the patient should occupy his mind with work, whereas he is claiming compensation legally for inability to follow his ordinary occupation. Dr. W. Mair writes on enlarged thymus and records a case in which after death there was found waxy degeneration of the heart muscle; and Dr. Alan McDougall discusses the treatment of status epilepticus, noting the importance of watching for the occurrence of hyperpyrexia and treating it at once when present, and advising the withholding of all food from the patient, but administration of plenty of water.

The West London Medical Journal.—Literature is rapidly accumulating on the subject of the Ehrlich-Hata remedy for syphilis, generally known as "606." In the January issue of this journal Mr. J. E. R. McDonagh gives a very interesting account of the steps which led to its introduction and to the experimental work done with it on animals. He also discusses its therapeutic use and notes the fewness of the accidents which have followed its administration. Dr. Reginald Morton writes on X ray examination of the urinary system and describes the technique advisable for the purpose, and Mr. J. D. Mortimer contributes a paper on the selection of anæsthetics for various types of patients and forms of operation.

The Birmingham Medical Review.—The original matter in the December issue of this review is entirely gynæcological. Sir J. Halliday Croom, in an inaugural address to the Midland Medical Society, deals with the narrow pelvis and lays emphasis on the necessity for maternity homes for the conduct of labour, which differs so little in many cases from a surgical operation. Professor R. F. C. Leith's Ingleby lectures on Tumours of the Body of the Uterus are continued, the present instalment dealing with sarcomatous degeneration of fibroids and with sarcoma and deciduoma malignum of the uterus.—In the January number is contained a paper by Mr. Leonard P. Gamgee on the operation of lymphangioplasty as devised by Mr. W. Sampson Handley and a summary of a post-graduate lecture by Dr. James E. A. Sawyer on Chronic Affections of the Lungs in Children, in which he notes the rarity of any condition resembling adult pulmonary tuberculosis in children under 12 years old.

UNIVERSITY COLLEGE LABORATORIES FUND.—Lord Iveagh has promised to increase the donation of £250, which he has already given to the University College Chemical Laboratories Fund, to £1000. Over £19,000 have been collected for the Fund.

New Inventions.

IMPROVED FORCEPS.

THE accompanying illustration shows a forceps made to my design by Messrs. Allen and Hanburys, of 48, Wigmore-street, London, W., to facilitate the performance of Kocher's invagination operation for the radical cure of inguinal hernia. As will be noted, the shaft of the forceps has a gentle curve bringing the head to the level of the handles. The head is bullet-shaped, bearing a slot on either side. The head of the forceps carrying the invaginated sac protrudes the parietal

peritoneum into the opening made by separating the fibres of the internal oblique and transversalis muscles, and here it is secured. Through the button-hole now made in the peritoneum the sac is very readily picked up by inserting the teeth of a tenaculum forceps into the slots in the head of the hernia forceps. The forceps have proved very satisfactory and render the performance of this excellent operation very simple, and if working single-handed or on a muscular subject they are invaluable.

HARRY CRICHTON, M.D., B.S. Durh.,
South Shields. Assistant Surgeon, South Shields Infirmary.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.

A COUNCIL meeting of this association was held at 34, the Copthall-avenue, London, E.C., on Jan. 20th, and chair was taken by Surgeon-General G. J. H. Evatt, C.B., President of the association. The following matters, among others, came before the council. The honorary secretary submitted a letter from a provincial member asking for advice under the following circumstances. He had been appointed medical officer to a certain district with a permanent tenure of office, but had inadvertently moved out of his district by a few hundred yards. He hoped that he would have no difficulty in getting re-elected periodically when his term of office periodically expired. In this, however, he was disappointed, for he had lately had notice that he would not be re-elected at the expiry of his present term of office. The council were of opinion that it was very unwise to act in this manner. By so doing this officer had placed himself entirely in the hands of the guardians and must lose his office unless he could induce his guardians to re-elect him. It could not be too strongly impressed on district medical officers that they could only have security of tenure in their office throughout the country generally *so long as* they resided in their districts.

A letter was read from another member complaining that his guardians had objected to a surgery he had constructed adjoining his house on the ground that it was not built of brick and roofed with slate, although they had permitted the use of similar surgeries by other medical officers in the union. The council considered that this was a matter for the sanitary authority, and if the latter saw no objection to the construction of the surgery the guardians had no right to object.

Another letter was read from a country member, 65 years of age, who stated that he held a second Poor-law district outside his own union, and after holding it for 11 years he was now called upon to resign it. Could he claim any pension on account of it without resigning his other Poor-law appointments, as he had had deductions from his salary for this appointment? The Council considered that he should resign all his appointments and take his pension on the whole if he wished to insure himself against loss, as he was not entitled to any pension so long as he held any Poor-law appointment.

A letter was also read from another member dealing with the same point, but in this case he had not reached the age for retiring, and had held the outside appointment for 13 years. In this case it appeared that the officer would be bound to forfeit all his deductions of salary under the Superannuation Act unless he could retire within the next four years, as only the average salary during the last *five* years could be estimated in fixing the pension. The Council thought this very inequitable, and that such an appointment ought always to be allowed for in reckoning the retiring pension, or that at least the officer should be entitled to claim a return of all deductions from the salary of that appointment for superannuation purposes.

Another country member wrote that the guardians of his union had sent round a circular stating they had decided that the present salaries of the medical officers should be fixed as a "maximum" for their appointment. Could the guardians fix such a "maximum"? He also asked if it were legal for the district medical officers of a union to contract out of the special fees for operations, &c., laid down by the general order of 1847. The council was of opinion that in neither case would this be legal unless with the consent of the Local Government Board.

The honorary secretary reported that he and the other delegates of the association had been present at the first meeting of the Poor-law Conference held at Norfolk House on Dec. 9th last.

It had there been decided that each section of the Poor-law Service should formulate through its respective association what reforms it considered necessary for the betterment of its particular service. He had forwarded to the conference all the resolutions that had been duly passed up to the present, but he thought it desirable that the various points of medical Poor-law reform should be put forward in more detail, especially as a Departmental Committee had been appointed by the Local Government Board to revise the General Orders.

After a careful consideration the council decided that the following recommendations should be put forward on behalf of the Poor-law medical officers of England and Wales:—

1. That the provisions of the Metropolitan Dispensaries' Order, as far as possible, should be made to apply to the country generally, and that all appliances and drugs for the use of State patients shall in all cases be provided at the expense of the State.
2. That there should be a revision of the scale of payments for operations, and more facilities granted for obtaining assistance, and paying for the same. This specially applied to the provision of an anæsthetist. The medical officer should not be at the mercy of the Poor-law authority with regard to this assistance; it should be left entirely in his hands, with only some reasonable check to prevent abuse.
3. In all cases where called in to attend a confinement in his official capacity he should have an inalienable right to his fee. If the case be an improper one from a Poor-law point of view the authority should be left to recover payment from the husband.
4. The Poor-law authority should be compelled to contract with the workhouse medical officer or superintendent of infirmary to vaccinate all infants in the workhouse or infirmary and to carry out the Vaccination Acts generally.
5. The notification of measles and whooping-cough should be carried out in the same manner as has been recently adopted in the case of tuberculosis of the lungs.
6. The salaries of Poor-law medical officers should be on a more liberal scale, due regard being taken of the average mileage in the case of visits to sick patients. That to meet exigencies of changes of population the medical officer should always have a right to claim a revision of his salary when his work has been greatly increased by such change.
7. That an allowance should be made by the Poor-law authority for the carrying out of the Poor-law work of a medical officer during his annual holiday and during sickness.
8. That length of service, as in other public services, should constitute a ground for increase of salary, apart from other considerations.
9. That a common fund be instituted to receive all payments under the Poor-law Officers' Superannuation Act, so that the expense of pensions should not directly fall on a particular locality.
10. That in all cases where for public reasons the office of a Poor-law medical officer is determined, if he or she be not entitled to a pension, an allowance shall be made of a sum equal to the average emoluments derived from that office during the period of two years. Provided always that such determination be not due to misconduct on the part of the officer.
11. That in no case shall it be lawful for the local Poor-law authority by bargaining with individual medical officers to reduce the amount paid at any time annually in medical salaries for attendance on its poor, unless it can be clearly shown that owing to local changes the sickness claims have very materially diminished in that area.
12. That in all cases where, owing to residence outside his district, a medical officer has only been appointed for a year or a term of years, if the said appointment has been continued for a period of seven or more years the said medical officer shall thereafter be entitled to hold office on the same terms as if he resided in his district.

THE LANCET.

LONDON: SATURDAY, JANUARY 28, 1911.

Annual Report of the Medical Officer of the Local Government Board.

SHORTLY after Christmas the annual report of the medical officer of the Local Government Board for 1909–1910 was published. As year by year we peruse these valuable volumes we cannot help wondering whether it might not be practicable to issue one annual report, not only upon the British Isles as a whole, but also upon the health conditions of the empire. But we fear that this might prove a difficult matter, and perhaps, after all, the different practices which obtain in Scotland and in Ireland furnish us with comparative studies from which each local government authority selects that which best suits its needs; although, on the other hand, there is in certain directions necessity for more uniform action in the three divisions of the United Kingdom than is at present the case. We must confess, too, that we should like to see the annual report of the English Local Government Board embody some sort of summary or review of the health conditions obtaining in Scotland or in Ireland and in the colonies, and perhaps the best means of accomplishing this end would be to make the President of the Local Government Board Imperial Minister of Health, a step which has been often suggested for many reasons, and one which would tend to centralise all information relative to health matters in one Government office. It must not be inferred that we are in any sense disparaging the work of the Local Government Board; rather must we be understood as implying that the work of the medical department has always been maintained at such a high level of excellence that we should like to see its sphere of influence materially extended.

The report just issued differs but little from its long line of predecessors; it contains an introduction by Dr. ARTHUR NEWSHOLME, the medical officer, reports by the medical inspectors, some of which have been already published and have been reviewed in our columns, memoranda issued by the Board upon various subjects, increasingly depressing figures relative to the administration of vaccination, and, finally, an account of the auxiliary investigations carried out during the year. As it is our intention to deal in one or more special articles with some of the more interesting features of the report we shall here mainly confine ourselves to an indication of the general scope of the volume. The most interesting innovation is a review by Dr. H. FRANKLIN PARSONS, the senior assistant medical officer, upon epidemic diseases in England and Wales during 1909, a contribution which really amounts to a sketch of the behaviour of measles, whooping-cough, scarlet fever, diphtheria, enteric and typhus fevers, small-pox, influenza, and epidemic diarrhœa over the years for which reliable figures are available. Dr. PARSONS, the author of classical works upon disinfection, influenza, and many other subjects, is well qualified for supplying reviews of this character, since his intimate knowledge of epidemiology and cyclical waves of disease enables him to avoid the pitfalls into which more superficial workers are so liable to be precipitated owing to too restricted a review of the past history of disease. It is much to be hoped that these annual reviews will be continued, although we are afraid that Dr. PARSONS, who, we believe, is approaching the age limit of the Civil Service, may not be much longer available for the purpose. But possibly in his well-earned retirement after so many years of silent service he may, unfettered by the exigencies of office, take up his pen and write of epidemiology. Dr. R. BRUCE LOW contributes, as in past years, his useful summaries of the progress of plague and cholera, and his review as to plague progress and prevalence makes especially interesting reading at the present time owing to the tendency of this disease towards general diffusion. Dr. S. W. WHEATON, one of the inspectors, furnishes an interesting report upon enteric fever prevalence in the county of Durham, and this has already, we believe, been published.

Dr. G. S. BUCHANAN reviews the work of the food inspectors, dealing with the action taken under the Public Health (Regulations as to Foods) Act, 1907, the local arrangements made for meat and food inspection, work in relation to the Sale of Food and Drugs Acts, and foreign and colonial food legislation. Dr. BUCHANAN'S report is reviewed in another column of this issue of THE LANCET. Dr. J. C. G. LEDINGHAM'S report on enteric fever carriers is also embodied in the volume before us, and this was fully reviewed in our columns when it was first issued.[1] Amongst what are known as the auxiliary scientific investigations is a report of work carried out by Dr. F. W. ANDREWES upon the behaviour of the leucocytes and the changes in the bone marrow in relation to infection. Numerous organisms were subjected to test during the course of the experiments, and the general conclusions arrived at show that the human economy responds in different fashion according to the nature of the organisms employed—that is to say, that the method of defence depends upon the character of the attack. Dr. W. G. SAVAGE has continued his investigations upon the Gaertner group of bacilli in prepared meats, and the later experiments have tended to emphasise the former conclusions that outbreaks and isolated cases of food-poisoning are due to specific infection of the food and not to non-specific excretal contamination. The important subject of the bacterial measurement of milk-pollution is also dealt with by Dr. SAVAGE, who is of opinion that the most reliable inferences can be drawn by estimating the number of bacillus coli and its near allies, and of the spores of the bacillus enteritidis sporogenes, as well as of a microscopical examination of the centrifugalised deposit. We are glad to see, too, that Dr. SAVAGE advocates that bacteriological examination shall be carried out side by side with inquiries at the sources of the supply of the milk. The chemical aspects of epidemic diarrhœa have been investigated by Dr. H. A. SCHÖLBERG and Mr. MACKENZIE

[1] THE LANCET, Dec. 3rd, 1910, p. 1631.

WALLACE, who have endeavoured to discover in milk chemical substances which, due to bacterial metabolism, are able to stimulate the secretory functions of the gastro-intestinal canal. The authors conclude that the presence of the peptones and peptone-like bodies may explain the reaction of the infants' gastro-intestinal tract to certain microbial infections. They found that during the summer months peptones were present in milk samples in large quantities whenever the samples yielded a higher bacterial count.

The possibility of purifying chalk waters by chemical methods is a very important consideration in view of the growing opportunities for the pollution of these waters which arise in consequence of the extension of human habitations over uncovered chalk areas. It was therefore decided that Mr. C. E. MOORE and Professor HEWLETT should carry out some investigations with respect to the sterilisation of chalk waters, and it was found that such sterilisation could be effected under laboratory conditions by adding 0·25 part per million of bleaching powder and allowing the action to continue over half an hour. But as to this, Dr. NEWSHOLME in his introduction remarks that these experiments in no sense justify sanitary authorities in refraining from every effort "to minimise and remove cesspools and other sources of pollution in their gathering areas, while trusting to treatment by chlorine, ozone, and other chemical means of purification." We are in full agreement with this sentiment, and it is clear that these chemical means of purification must, at any rate for many years to come, be regarded as merely supplementary agencies and not as substitutes for securing the sources of supply against pollution.

Dr. NEWSHOLME reports that up to October, 1910, 51 local authorities had received the sanction of the Local Government Board to add ophthalmia neonatorum to the list of diseases notifiable under the Infectious Diseases (Notification) Act. With respect to preventive measures against tuberculosis the medical officer states, on the basis of the annual reports of medical officers of health, that the order providing for the notification of pulmonary tuberculosis amongst paupers has in several districts been taken advantage of and good work carried out under its provisions, more especially in districts where means exist for helping the patients. Considerable space is devoted in this introduction to the subject of infantile mortality and Dr. NEWSHOLME emphasises the part played by alcoholism in this direction. He also summarises the report upon infantile mortality, which was issued as a separate paper and which we noticed in full in our columns at the time.[2]

Sir Francis Galton.

THE death of Sir FRANCIS GALTON deprives England of a type of man of science not easily to be replaced. Maternally descended from the DARWIN stock, and hence a conspicuous illustration of a doctrine which he did much to confirm and popularise, he was conspicuous throughout his long life by that habitual preference of truth to system which is characteristic of the philosopher, and by that constant respect for the opinions of those who differed from him which is characteristic of the gentleman. His habitual caution rendered him almost exempt from the errors which are incidental to haste, and his habitual moderation rendered him almost exempt from the errors which are incidental to uninformed and presumptuous judgment. Always kindly, always dignified, always urbane, he received with gracious courtesy the inquirer who would investigate the basic facts of his doctrines; and he was always ready to place the stores of his memory and the fruits of his researches at the service of the genuine student. He met irrelevant criticism with a genial smile; and the infirmity of his later years enabled him, on more than one occasion, to imitate with much effectiveness the example of REYNOLDS:

> "To coxcombs averse, yet most civilly steering,
> When they judged without sense he was still hard of hearing."

The work of the earlier portions of a life which for something like 65 years was mainly devoted to scientific inquiry has, almost of necessity, become enshrined among the accepted truths of to-day, and is now hardly remembered in its detail. There are still a few elderly men who can recall the sensations with which they first read "The Art of Travel," with its infinite variety of devices for warding off the dangers or for obviating the discomforts of the wilderness; and there must be many more who remember the groundwork of modern meteorology which was laid in the years between 1860 and 1870. But the turning points of GALTON'S career, as far as the general public were interested in it, were his studies of finger-prints and of the hereditary character of intellectual ability. The idea once seized, that the papillary ridges of every individual present individual peculiarities, scope was at once given for the exercise of the untiring diligence and the unsleeping caution which were the main elements of the philosophical side of his character, and the whole matter was in due time worked out to its conclusions, and was rendered available for the many practical purposes to which it has since been applied, including, among others, a greatly increased patronage of the glove trade by the professors of the art of burglary. But the question, calculated though it was to arrest attention, was only a by-product of GALTON'S diversified ingenuity. He did not claim to be the originator of finger-print reading and he did not suffer its consideration to occasion any neglect of the main idea to which his thoughts had become directed, the idea which he afterwards expressed in the word "Eugenics," and which might be defined as the belief that the average fitness and capacity of the human race may be improved by the practice of selection in parentage. It was for the support and extension of this belief that GALTON founded the research fellowship on the subject in the University of London, and that the Society of Eugenics has since been established by his friends for the better prosecution of the work. He has shown quite conclusively that the family which has produced one member of conspicuous ability has, in the great majority of instances, produced others of like kind, and although some allowance must be made for the increased opportunities afforded to the younger members of a house when one of the seniors has risen to eminence, it seems

[2] THE LANCET, August 6th, 1910, p. 412.

clear that the influence of this cause is by no means sufficient to explain events which are matters of history. It must be taken as a fact that certain families are of distinctly higher type than others, more perceptive, more intelligent, more determined, more persevering; and that, although these also may produce their weak members, the general average will be superior to that of the community at large. The real problem is to ascertain whether differences of this kind, produced at present we know not how, can be produced artificially by any process of mating; and if this be possible, whether the conditions of mating required are of such a kind as to admit of fulfilment in modern society.

To this question, we apprehend, Sir FRANCIS GALTON was prepared, at all events during his later years, to return an affirmative reply. He believed that it would be possible to bring about a general improvement of the human race by selection in marriage, and he looked forward to a future when such selection "will be required by the national conscience, and will become an orthodox religious tenet." The difficulty, as it presents itself to us, is mainly that of instituting the necessary experiments, and of excluding obvious sources of error. The late Mr. HEPWORTH DIXON published, many years ago, a book descriptive of the tenets, social and religious, of a number of queer sects or communities which were existing in the United States; and among these there was one in which marriage was not permitted as an institution, but in which certain couples were selected by the council of the community for the purpose of producing the children necessary for its continuance. Temporary unions for this purpose were only allowed between the young of either sex and the mature or middle-aged of the other, a young man being first mated with a mature woman, or a young woman with a mature man, and each being provided with younger concubines in subsequent years. All the parties to these transactions were required to be in good health; and it would be highly interesting, if it were possible, to ascertain what had become of their descendants. Short of such evidence as might thus be supplied, the chances of error in selective mating seem insuperable. The departures of children from what appears to be the parental standard, in the direction either of improvement or of deterioration, are sufficiently numerous and sufficiently manifest to require a good deal of explanation, and it is evident that the causes of these departures are to a great extent unknown. The Liturgy defines the objects of marriage to be not only the "procreation of children" but also "the mutual society, help, and comfort that the one ought to have of the other," and it would be curious to inquire whether the ordinary methods of selection are calculated to fulfil both these objects with equal efficiency, or whether one of them may not sometimes be sacrificed to the other. Nothing is more curious to a bystander, few things are less explicable, than the ground of selection which induces some particular man to take some particular woman; and it is at least possible that the impulse to selection may sometimes have as much to do with an expectation of mutual help and comfort as with any real congeniality for the purposes of procreation. In other words, the union best calculated to produce vigorous offspring may not be that which is actually brought about by the instincts of the couple concerned. Each may be attractive to the other, and yet it is conceivable that each might produce better offspring with some other mate. In these considerations we have a difficulty which lies at the root of what may be called applied eugenics; and it is a difficulty to be removed, if at all, only by a much more extended and more careful observation of facts than has been yet carried out. Perhaps the medical inspection of school children, when it has been in progress long enough for the proper systematisation of records, may afford valuable data, especially in the direction of light upon the parentage of children who display any tendency to rise out of the class in which they were born. In the meantime much work is being done by our eugenists, who must not, however, expect us to accept their conclusions as yet with great freedom. The practical science of eugenics is still very young, and eugenists must remember that the master whose loss they and we alike deplore, was an uncompromising enemy of hasty generalisation, and a consistent advocate of the slow and careful building up of truth.

The Relation of the University to the Hospital.

CENTURIES ago, when most even of the oldest universities were comparatively young, and when the great majority of those now existing had not begun to be, a university was supposed to have fulfilled its duty when it had afforded opportunity for its students to acquire all the theoretical knowledge of the day. The practical application of knowledge, or the study of those subjects which deal with practical utility, was not considered necessary; the learning was there, but the application of that learning to everyday work was wanting, for no one had perceived the need of joining up the two things. When hospitals were first started, in this country at least, they had, of course, no connexion with seats of learning; the idea that the principal part of the pious work designed by the charitable founders might well be carried on by persons in touch with the expansion of knowledge occurred to no one for some time. In London, for example, the medical schools, while developing as outgrowths from the hospitals, were much resented by many of the managers of the hospitals. The delivery of lectures to the students and the admission of them to work in the wards were in some instances carried on against opposition, it not being perceived that in this manner only could there be trained up a class to receive the fruit of the medical experience of their seniors. Of course, this time has completely gone by, and no longer is the value of a medical school to a hospital disputed, but, as everyone knows who follows the public discussions which now take place frequently upon medical affairs, the relations between the hospital as a seat of clinical medicine and the university (or scientific corporation) as a centre of learning, are capable of debate.

Medicine in all its branches has undergone enormous progress of late, as it is necessary to point out perpetually. The subsidiary sciences of bacteriology and pathological

chemistry have assumed an importance undreamed of 30 years ago. There has, indeed, been perceived by some critics a tendency to exalt the bacteriologist to a position above that of the clinician, but this, even if it has occurred, is merely a passing phase—a recognition of the importance of bacteriology in modern medicine. Bacteriology has been unduly depreciated in the past, and therefore it is not strange that now, when its value is universally recognised, there should be a tendency to make up for past neglect, a spirit which must not be interpreted as a desire to undervalue the work of the clinician. Professor OSLER'S address on the Hospital Unit in University Work, which we publish in THE LANCET this week, pleads for the fuller equipment of hospitals on the scientific side, for in only too many cases the application of the latest knowledge to the practical needs of the hospital is hampered by want of money. Again, the hospital physician or surgeon, often an extremely busy man, has not the time to devote himself to the original study of bacteriology and pathological chemistry. He has to carry out his arduous clinical tasks and he has in most instances to earn his living. But his work will be incomplete, will indeed be dead, unless he receives that assistance from the newer branches of science which they are able to give him. It is the function of a university, so far as its medical students are concerned, to train the students and to advance research. It is the function of the hospital, not only to treat the patients who come to it, but also to assist in the training of students. The primary function of the hospital is not to serve as part of a medical school, and medical men have never asserted the dependence of the hospital on the school, though they are constantly accused of taking up this position. The treatment of the patients is the primary purpose for which hospitals have been established, but with this treatment the training of students is now so inextricably bound that the one duty cannot be divorced from the other. The training of students is simply a method of making proper preparation for the treatment in the future of patients both within the hospital and without. Money definitely left to a hospital for medical education must not be employed in supporting the patients, and in the contrary position the same respect of the wishes of the charitable public must be observed; but as the best medical treatment is the result of research carried on in medical schools, and as the charitable public desires, of course, the best medical treatment for the objects of its charity, it is clear that the ward and the laboratory cannot be treated as totally unconnected affairs. And, lastly, the services of the students in the direct treatment of the patients are of vast importance, and effect substantial savings in the funds of the great general hospitals. This point should be remembered by those who look only at the advantages offered by the hospital to the student.

Professor OSLER pleads for the fuller equipment of hospitals on the scientific side. He urges that in many instances universities are so much indebted to hospitals that they should assist financially in providing the equipment required, and he sketches the organisation of what he calls a hospital unit. In an ideal hospital each unit would include only one subject, such as medicine, and for this there would be at least 60 beds and at the head the professor of the subject. To it would be attached an out-patient department, and it would possess its own laboratories, which should form an essential part of the unit, though for the sake of economy its work might be merged with the pathological work of other units. He describes the large number of assistants that would be needed for the due carrying out of his scheme, and considers that adequate funds should be provided for the satisfactory progress of the work. It is impossible to retain good junior men in a hospital and to induce them to devote their time to its work and to the teaching of students unless adequate payment is made for their services. Professor OSLER considers that the arrangement at the Johns Hopkins Medical School is good, the university paying half of the salaries of those members of the staff who are directly engaged in teaching and one half of the laboratory expenses. The public does not recognise its debt both to the hospitals and to the university. To the opportunities for studying which are there provided the public is indebted for most of those great advances in medicine which have revolutionised the treatment of disease within the last half century; and this is a debt which the public should pay both to the hospital and to the university. Professor OSLER'S address should do good service in bringing before the medical profession the vast importance which such reorganisation of hospital administration as he projects would have.

Annotations.

"Ne quid nimis."

THE LOCAL GOVERNMENT BOARD AND FOOD INSPECTION.

THE Local Government Board has now issued a reprint of the portion of the medical officers' annual report for 1909–10 which relates to the work of the food inspection branch of the medical department, and includes a report by Dr. G. S. Buchanan on the work of the Board's inspectors of foods during the year. The reprint[1] will be of much value to medical officers of health and sanitary inspectors, and has a wider public interest as a record of the progress which has been made by the Local Government Board during the presidency of Mr. John Burns in reforming the methods by which the purity of our food-supplies is controlled and adulteration prevented. The progress to which we refer has been most marked in the case of imported foods. The regulations issued under the Food Regulations Act of 1907 made the port sanitary authorities responsible for the examination of food-stuffs at the place of landing, so that unsound foods can now be dealt with in bulk and their distribution throughout the country prevented. Since the system was introduced there have been many occurrences which have proved its utility; for example, the importation of frozen carcasses of pigs from China which arrived last year in consignments of several thousand carcasses at a time and needed thorough investigation, and the great increase which has lately taken place in the quantity of butchers' "offal"—livers, sweetbreads, kidneys, and similar articles—which is obtained from foreign sources. Some 150 tons of the latter on arrival in 1909 were condemned as unfit for food. In consequence of the regulations

[1] Report on the Work of Inspectors of Foods for the year 1909–10. London: Wyman and Sons, Fetter-lane, E.C.; Edinburgh: Oliver and Boyd; Dublin: E. Ponsonby. Price 4d.

the importation of barrels and boxes full of miscellaneous scraps and trimmings of meat, which a few years ago promised to reach formidable dimensions, has virtually ceased. Fats resembling inferior lard were imported during the year which had been obtained from meat condemned at American packing houses as totally unfit for human consumption. By the American law the packages containing these fats were conspicuously marked "inedible," but they were found to have reached lard refiners in this country. Over 6500 barrels were consequently detained in Liverpool until adequate proof was furnished that the material would not be used for food purposes. At the principal ports at which grain, fish, fruit, and canned foods are landed, a system of "sorting" examinations has been developed. When the preliminary examination of the consignment has shown that it contains articles which are unsound, the consignment is only allowed to go forward after a thorough sorting to the satisfaction of the port medical officer of health. In the London port and riparian sanitary districts, and in the ports of Liverpool and Manchester, more than 400 tons of unsound canned food were handed over for destruction under this system in 1909. It is satisfactory to learn from the report that the examinations thus made appear already to have caused greater care to be exercised at the place of preparation, and have enabled importers to exact a higher standard from the foreign packer. Dr. Buchanan's report shows also that the central department, besides making inspections to see that the examination of food at the ports is conducted on uniform lines, has made numerous inquiries as to the conditions under which foods are prepared abroad. The information which we have published from time to time, as a result of the special investigations which have been made in foreign countries by representatives of THE LANCET, makes it unnecessary to dwell on the importance of this matter. The establishment of a mutual understanding between the authorities abroad and at home in regard to the supervision exercised over the preparation of foods which are to be imported into the United Kingdom is in many cases a necessary adjunct to the examination of the finished articles when they arrive. Other sections of the report deal with local arrangements for meat and food inspection, foreign and colonial food legislation, and work in relation to the Sale of Food and Drugs Acts. As Dr. Newsholme observes, the procedure of the Sale of Food and Drugs Acts is such that it is often difficult to stop misleading descriptions and false labelling of foods, and to repress various trade customs which result in debasing the quality and purity of staple articles of food. The inquiries made during the year in connexion with these Acts included the misuse of formaldehyde fumigation in the preservation of meat and other foods; the failure of the Sale of Milk Regulations of 1901 in Middlesbrough and other towns to secure the supply of milk with even an average proportion of fat; the preparation of "reconstructed" milk; the presence of paraffin in margarine and talc in rice; and the contamination of canned foods by metals.

THE ROYAL SANITARY INSTITUTE.

A COURSE of lectures and demonstrations for sanitary officers will be held from February to May at the offices of the Institute, 90, Buckingham Palace-road. The course is divided into two parts. The first part will commence on Feb. 13th and close on April 12th, and will deal with elementary physics and chemistry, public health and hygiene; and the second part will commence on April 24th, close on May 5th, and will deal with meat and food inspection. Most of the lectures will be given on Mondays, Wednesdays, and Fridays, and the lecturers will include Professor H. R. Kenwood, Dr. E. Petronell Manby, Dr. Charles Porter, and Dr. E. J. Steegmann. Inspections and demonstrations in connexion with disinfecting stations, dairy premises, municipal depôts, artizans' dwellings, offensive trades, waterworks, common lodging-houses, sanitary works, and refuse and sewage disposal works will take place from time to time. The fee for Part 1 is £3 12s. 6d., for Part 2 £1 1s., or for the complete course £3 3s. A course of lectures and practical demonstrations on physiology, personal hygiene, and the sanitation of school buildings and dwellings, principally for the purpose of assisting school teachers, women health visitors, and school nurses, will also be held at the Royal Sanitary Institute on Mondays, Wednesdays, and Fridays, commencing on March 3rd and ending on May 1st. The lecturers will include Mrs. Marion Hunter-Vaughan, L.S.A., D.P.H., Professor Kenwood, Dr. A. Beresford Kingsford, Dr. G. Eric C. Pritchard, and Dr. C. J. Thomas. The fee for the course is £1 1s. Both courses of lectures will commence at 7 P.M. Full particulars may be obtained from the secretary, Mr. E. White Wallis, 90, Buckingham Palace-road, S.W.

THE SHADOW OF A DREAM.

Robert Louis Stevenson has admirably described his sensations during the light-headedness of fever. The kind of mental worry, varied by fatuous contentment, induced by the continued effort to effect something in thought or act, or both—the victim does not know which when properly light-headed—are set forth in the inimitable manner so dear to lovers of Stevenson. It is remarkable that the passage has received so little attention, for it leads us to wonder whether Stevenson ever suffered from any other hallucinations than those here adverted to. Did he, as became an imaginative Scot, ever "see a ghost"? Apparitions are the outcome of a morbid condition of the brain—at least, science mainly, if not always, believes them to be so. It is quite possible that something in the nature of light-headedness precedes all hallucinations, and in this connexion we may quote a letter we have received from a well-known man of letters. "The writer," he says, "may perhaps be forgiven for setting on record a queer little grey experience of his own, which happened within the last few days. He had retired to bed, tired, slightly liverish, and worried by fruitless discussions and money matters—the commonest of psycho-physical syndromata—but had determined to sleep and to think no more of his troubles. To this end he read a historical essay about the murder of Escovedo under Philip II. of Spain, and had settled down to sleep at 11.40 P.M. He remained awake with his eyes shut until midnight, the names and ideas in the tiresomely written article he had just been reading 'running in his brain,' to use the common phrase. At midnight he was again broad awake, and saw standing at the foot of his bed, between him and the still brightly burning fire, what shortly became the shadowy figure, life-size, of a little old woman. She wore a grey shawl and black bonnet, and looked for all the world like one of the neighbouring Kensington Workhouse women. Her face was turned away. The figure, be it said, took shape gradually, and the impression at first was that it was nothing, merely fancy. But on opening and shutting his eyes, moving his head sharply and thoroughly recognising where he was—in bed among familiar objects, &c.—the *Geisterseher* was startled for just the fraction of a minute to find that the figure had taken firm shape and did not move. It was apparently objective and outside himself. It faded away very quickly, and it then became apparent that there was a dark shadow in a corner of the ceiling near where it appeared. It was plainly of the family of dreams, 'the children of the night

without a father,' to quote the old Greek poet. Had it not been a dream-fancy, from beyond the threshold of the subconscious, it would have connected itself with old Spain and Escovedo. As it was, it had nothing to do with recent mental preoccupations, although it certainly personified, quietly and surely enough, the grey and prosaic tenour of the middle-aged existence into which it had come for the first time." Mixed offspring of liver, teichopsia, worry, recent insomnia, and ill-health, the little grey woman will remain a mystery to the writer, so he alleges. None the less, he comes of an ultra-sceptical stock, his father having been a quaternionist and a devotee of dry science, and his great-grandfather a French Jacobin of 1794, famous in his day for his scandalous addiction to the worship of the Goddess of Reason! In accordance with such family tradition, ghosts, apparitions, and the rest must have always appeared to the writer as so many manifestations of primitive thought, and as negligible, therefore, as the belief in luck or magic. Most ghost-seers are unwilling to analyse their feelings and are prone to give way to the excitement of the moment. Hence, doubtless, have arisen innumerable "well-authenticated" ghost stories, which, on analysis, should have proved to be the result of indigestion or overstrain. Savages and primitive people generally, such as the old Highlanders and Lowlanders of Scotland, probably have suffered on occasion from epic dyspepsia.

A NEW DIAGNOSTIC OF MALARIA.

Dr. C. L. Urriola,[1] writing from Panama, describes a sign of malaria which he terms "new and pathognomonic." As he says in his introductory remarks, the discovery of the parasite in the peripheral blood is a means of diagnosis of the greatest possible accuracy, but with the serious drawback that it is inapplicable to many phases of malaria. There are, for instance, the latent forms of the disease, and the malarial cachexia, conditions in which an accurate diagnosis is of the highest importance, but in which the surest diagnostic sign, the discovery of the parasite in the blood, is not available. Certain methods of diagnosis have, it is true, been brought forward for application to these latent types of paludism in which a search for the parasite in the blood is fruitless; of these Dr. Urriola particularly mentions agglutination tests and urobilinuria. These tests have, however, been proved fallacious, since they do not adequately exclude the presence of other disorders than malaria; and Dr. Urriola in his search for a more reliable test fell back on Laveran's statement that the one constant pathological change in malaria is the presence of pigmentary elements in the blood, a change which has the merit, from the diagnostic point of view, of being peculiar to malaria. At the outset of his researches, therefore, he concentrated his attention on an examination of the plasma for the presence of pigment granules; but this was abandoned as soon as he found that an examination of the urine of malarial subjects discovered the presence of pigment with great constancy. The urine is collected carefully and a specimen is centrifugalised; the deposit is examined under a high magnification. The result, according to Dr. Urriola, is that in the urine of every malarial subject granules of pigment are to be found in one or more of four types. First, there are very fine granules massed together in more or less considerable groups; second, there are rather larger grains arranged in similar groups; third, the pigment may be found in larger masses varying in form; and finally the granules of pigment may be included within leucocytes or hyaline casts. Usually the pigment is an intense black of the Chinese ink type; in many cases blue granules are found, though these form but a small fraction of the total pigment present; and in a few cases yellow-ochre granules are discovered. These can, he claims, be readily distinguished from the translucent yellowish masses dotted with black, red, or brown granules which appear in the urine of persons suffering from other febrile disorders, both by differences in quality and by the much greater abundance of pigment in malarial urines. He illustrates the value of his observations by a relation of several cases whose nature, hitherto obscure, was declared by an examination of the urine, which discovered pigment granules. Investigators are warned that the search may need to be prolonged for half an hour, and that it should include more than one drop of the centrifugalised deposit. He concludes with a statement to the effect that the discovery of black pigment in urine is likely to prove more valuable in the diagnosis of malaria than the observation of parasites in the blood because it is applicable to every type and stage of the disease. It is probable that these statements will undergo modification at the hands of future investigators; but Dr. Urriola's claim is one of so much practical importance that it deserves attention and further examination. Whether his claim to be first in this field will be challenged also remains to be seen; the literature of modern medicine is so voluminous that it is difficult to be safe in a claim to priority.

[1] La Semaine Médicale, Jan. 4th, 1911.

CHAMPAGNE AND ITS SIMILARS.

HOWEVER deplorable and inadvisable in their own interests the methods of seeking redress may have been which the peasants in the Champagne district recently adopted, the agitation conveys some lessons of peculiar importance to both the medical man and the public. The destruction of property, of course, is never a justifiable or satisfactory means of obtaining a remedy, but when the facts of the situation are realised it will be seen that a very real grievance existed which led to violent measures being taken. Disaster has fallen upon the vineyards of the Champagne district, as it has upon so many of the vineyards in France, in consequence of the inclemency of the season. The local *vendangeurs* lost their occupation and their means of livelihood. The proprietors sought to replenish their stocks by importing grape-juice from districts outside Champagne in which some grapes were harvested owing to the better weather conditions that had prevailed there through the season. The peasants lost their work, in spite of which wine was being made. They destroyed a good deal of the stock, protesting that the good name and character of the real Champagne product should not be trifled with or endangered in this way. The view they took is entitled to the greatest sympathy; though the means of redressing the evil was crude and not calculated to help them or to settle the industrial problems. The whole incident seems to us to throw considerable discredit on the Champagne industry. It implies that grape-juice need not necessarily come from the Champagne district in order to produce the esteemed qualities of Champagne wine. We do not believe, however, that manipulation can reproduce the inherent natural qualities of the Champagne grape itself from grapes of outlying districts with, at any rate, a success which will satisfy the connoisseur. It is clearly misleading, at all events, to call such a product champagne, and against this we protest. The fine qualities of true champagne are, after all, a matter purely of æsthetic sense, and it can hardly be disputed that sparkling wines produced in other districts and showing a similar composition and soundness to champagne answer, physiologically speaking, equally well. The high price paid for champagne is the price of its elegance and flavour and not of its composition. To produce sparkling wines by the help of grape-juice from districts

other than the Champagne area, which may successfully masquerade as Champagne, is, of course, an art, but the proceeding tends to discredit the genuine article and to lead us to inquire somewhat pertinently as to what is really being paid for in the extravagant prices commonly demanded for champagne. We are certain that many of the honest sparkling wines which are not champagne, and which are sold in this country at a third the price of champagne, are, physiologically speaking, equally valuable. There is very little difference between the composition of, for example, a sparkling Saumur or Medoc and that of a genuine champagne. They may be obtained equally dry, equally free from acid, and equally pleasing to the palate of many people if they happen to be innocent of the brand. The connoisseur, no doubt, readily detects a difference and can easily pick out the real champagne, but he is not the only consumer of sparkling wines. We have examined a number of sparkling wines of the Saumur and Medoc type, and they have yielded results on analysis which are in practical agreement with those given by a champagne. It seems to us that too little credit is given to the sparkling wines produced outside the immediate area of the Champagne districts on a sort of impression that a sparkling wine to be good and wholesome must necessarily be produced in Champagne. That impression is wrong, and the present attitude of the peasants in the Champagne districts is a striking example of the misjudgment of the public in this matter. The French Government, we suggest, might do well to inaugurate a system of control which shall secure nothing but the bottling of the Champagne-grown product under a Champagne label, and reserve another designation for other wines.

SAPHENOUS VARIX SIMULATING FEMORAL HERNIA.

IN the *Journal of the American Medical Association* of Dec. 31st, 1910, Dr. A. H. Noehren has reported a remarkable case in which a saphenous varix simulated femoral hernia, and later, as the result of thrombosis, strangulation of the hernia. A woman, aged 37 years, the mother of seven children, of whom the youngest was three years old, complained of crampy pains all over the abdomen, but most severe in the lower part of the left side, with continual rumbling of gas. She had always enjoyed good health and had worked hard all her life. As she had been constipated for a few days she had taken several doses of castor oil, which increased the pain, though they caused a good action of the bowels. The temperature was 98° F., and the pulse was 112. The abdomen was soft and nothing abnormal could be felt in it. Just below the left saphenous opening was a swelling about the size of a walnut. It was not tender, was easily reducible, especially when the patient lay down, and gave a decided impulse on coughing. The patient said that she had noticed this swelling since the birth of her last child, and that it never gave her any trouble. Dr. Noehren diagnosed femoral hernia and recommended operation in view of the danger of strangulation. The pain he attributed to the cathartic. Three days later he was called again. The pains had grown worse, especially on the lower part of the left side, and radiated down the left thigh. Frequent soft stools were passed, and there was marked rumbling of gas. The temperature was 100° F. and the pulse was 124. Peristaltic waves could be seen over the lower left side of the abdomen, which was tender and more resistant than on the right side. The "hernial mass" was a little larger, tender, and no longer reducible. Operation was urgently advised, but was declined. During the day the temperature rose to 102·6°, and an indistinct mass could be felt in the lower left quadrant of the abdomen. On the evening of the next day the bowels acted, but with much difficulty and straining. There was considerable resistance in the lower part of the left side of the abdomen, and the whole abdomen was swollen and tympanitic, especially over the course of the colon. The patient felt nauseated and vomited a little bile. The mass was tense, tender, and dull to percussion. The temperature was 102·2° and the pulse was 124. Operation was now insisted on. An incision was made over the "hernial swelling" sufficient for a radical operation. On dissecting out the mass Dr. Noehren found to his surprise that it did not emanate from the saphenous opening, but was a pouch springing from the anterior wall of the internal saphenous vein just below the saphenous opening. The vein was tied above and below and the mass was removed. On opening it was found to be a dilatation of the vein and to contain unorganised clot. The femoral ring was not unduly large. Nevertheless, Poupart's ligament was sutured to the pectineal fascia to prevent the possibility of a future hernia or the recurrence of one that might have slipped back into the abdomen. The wound was closed with interrupted silkworm gut sutures. Examination now revealed a large infiltrating mass occupying the pouch of Douglas and extending upwards into the left side of the abdomen. It was decided to terminate the operation at this point and await developments. The temperature was irregular for ten days after the operation, after which it suddenly became normal, where it stopped during the following eight days that the patient stayed in hospital. During this time the pelvic mass gradually became smaller and on her discharge could barely be felt. Saphenous varix in the situation described is very rare. According to MacCready's statistics, quoted in Keen's text-book on "Surgery," a saphenous varix, an abscess, and enlarged glands have been mistaken for femoral hernia 9, 47, and 115 times respectively in circumstances that allow comparison. In this connexion we are talking of simple varix, but in the case narrated above the circumstances were different. After three days a tumour with impulse on coughing and easily reducible became no longer reducible and tender, while there were a rising temperature, abdominal pains, a swollen tympanitic abdomen, and the other symptoms mentioned. After the operation the explanation was simple enough. The varix had become thrombosed, and the temperature and abdominal symptoms were due to pelvic exudation.

RAG FLOCK.

THE representatives of the rag flock trade would be well advised, we think, not to haggle over refinements if they wish to see their manufactures placed on a hygienic basis. There is at present a dissension amongst them; there are those who are in favour of efficient steam sterilisation, while others regard thorough washing coupled with drying by heat as all that is necessary to turn out a clean material. It seems to us that if, as a result of legislation, rag flock used for bedding and upholstery is compelled to undergo a process which is as effectual as the laundry is with soiled linen, the whole business would be freed from reproach. We do not expect our shirts to be completely sterile; we are content if they are clean. It may be suggested, however, that in the laundering process the fabrics are boiled and that thus some amount of sterilisation is effected. While that is probably true, it would not be difficult to insist that washed rag flock should afterwards be dried by heat, a step which, as a matter of fact, is adopted by the manufacturers themselves as a convenient method of finishing off the material. After carefully considering the *pros* and *cons* of the question, it seems to us to be a counsel of perfection to insist upon a degree of sterilisation for rag flock equal to

that required for, say, a surgical dressing. Moreover sterilisation does not necessarily remove filth, and the efficiency of sterilisation cannot be checked in the ready and simple manner that the efficiency of a washing process can. We have known sterilised bedding material to develop an offensive smell after a time, an objectionable quality which would be obviated by efficient washing. It will be a pity if the very desirable legislation on this matter should be delayed by setting up an unnecessary ideal, and on carefully considering both the scientific and economic aspects of the question we think that the majority of those concerned would welcome a Bill from Parliament providing for the cleansing and heat-drying of rag flock on the lines suggested.

REST IN BED IN ANGINA PECTORIS.

AT a meeting of the Académie de Médecine of Paris on Nov. 29th M. Ch. Fiessinger presented an elaborate study of the effect of rest in bed in angina pectoris due to organic disease (in which the attacks are always produced by exertion). The late M. Huchard has insisted on the value of reducing the blood pressure in angina pectoris, the crises of which are liable to be accompanied by increased blood pressure. M. Fiessinger pointed out that rest in bed not only lowers blood pressure but acts as a tonic to the heart and diminishes its irritability. What part is played by these different factors? In his cases he found four different conditions: 1. The blood pressure during the pain was normal or low and was not modified by rest in bed. 2. The pressure during the attack was raised but was not modified by rest in bed. These two classes formed only a minority of the cases. 3. The pressure was high and was lowered by rest in bed; this held for two-thirds of the cases. 4. In exceptional cases the pressure was not lowered, but even rose, and curiously this was not accompanied by increase of the pain. In the first class three patients were seen. An example was a man, aged 66 years, who had an aortic systolic murmur and showed only slight acceleration of the pulse on walking. An attack of angina pectoris followed the exertion of putting to bed a sick relative. The maximum blood pressure with Pachon's sphygmometer was 17 centimetres of mercury and remained the same after rest in bed, which caused the symptoms to disappear. In the second class three patients in the "sixties" suffering from atheroma with aortic disease were seen. The maximum pressure varied from 24 to 27 and was not modified by rest in bed. Yet the pain was much diminished—a proof that it is not the arterial tension which caused the pain. In the third class 11 patients were seen. Thus a man, aged 64 years, had a maximum pressure of 28 during an attack. Under rest in bed, ice to the præcordium, milk diet, and morphine injections the pressure was reduced to 19. Eight patients showed reduction of pressure of from 2 to 4 centimetres of mercury with great relief. In the fourth class, in which a high blood pressure was not lowered by rest in bed, the effect on the pain was variable; in some cases it was considerably relieved, in others only slightly. M. Fiessinger concludes that the part played by high blood pressure in angina pectoris has been exaggerated, and that this condition no more produces the crises than it does those of biliary colic or puerperal eclampsia. Rest in bed relieves the subjects of angina pectoris, but only partly by its effects on the blood pressure. To give full results rest in bed must be prolonged to six weeks, and even to two months when the patient cannot take a step without provoking pain. A milk diet should be ordered; later, farinaceous food may be added. The usual drugs (theobromine, trinitrine, morphine, and digitalin) are given at the same time. But nothing has such a certain and rapid action as rest in bed. Recourse should be had to it again if after a period of immunity the symptoms recur. The greatest relief is obtained in aged patients or in those who lose flesh during the treatment; the least in patients suffering from concomitant aortic insufficiency.

TOBACCO SUBSTITUTES FOR CHILDREN.

IF a policeman sees a child in a street or public place smoking a cigarette which proves on inspection to contain tea-leaves or some smokable herb other than tobacco, that child commits an offence under the clauses of the Children Act (1908) dealing with the prohibition of juvenile smoking, for the expression "cigarette" includes cut tobacco rolled up in paper, tobacco leaf, or other material in such form as to be capable of immediate use for smoking. The Act, therefore, does not leave untouched the question of the possibility of tobacco substitutes being as injurious to the child smoker as genuine tobacco. The Act dealing with this part of the subject assumes that not only the smoking of tobacco but of substitutes also is an offence, because all are calculated to injure the health. Nicotine is the substance commonly looked upon as the injurious constituent peculiar to tobacco, but doubt has frequently been expressed as to whether any important amount of the alkaloid is contained in the smoke, and therefore whether nicotine reaches the mouth. Tobacco smoke is a poison apart altogether from the question of its containing nicotine. Amongst other things contained in tobacco smoke are the poisons pyridin and carbon monoxide. The production of carbon monoxide and pyridin are, of course, not peculiar to the smoking or incomplete combustion of tobacco. They are produced in practically all cases where the combustible matter contains carbohydrates and nitrogenous matters. It would be an astonishing fact to find, for instance, in the incomplete combustion of tea-leaves, cane, paper, coltsfoot, or any dried herb that the smoke was free from one or other of these common pyroligneous products, as the chemist calls them. It has come to our knowledge that certain herbal mixtures are made for the express purpose of providing children under 16 years of age with something to smoke, under the idea apparently that the Act applies strictly to tobacco. We can well believe that such mixtures are likely to be just as mischievous as, at any rate, the lighter tobaccos, and if the smoking of these substitutes escapes the vigilance of the police the good intentions of the Children Act may be frustrated. The mixture is clearly sold under a misapprehension on the part of the sellers, as its sale to children should come under the same restrictions as tobacco.

THE ISOLATION OF EPIDEMIC DISEASES BY THE METROPOLITAN ASYLUMS BOARD IN 1910.

IT is difficult to over-estimate the beneficial effect of the Metropolitan Asylums Board hospitals on the health of London, through the isolation and treatment of epidemic diseases, more especially of scarlet fever, diphtheria, and enteric fever. According to returns furnished to the Registrar-General during the 52 weeks of last year, it appears that 15,053 cases of these three diseases were admitted to the hospitals of this Board—namely, 9682 of scarlet fever, 4698 of diphtheria, and 673 of enteric fever. During the year 10,231 cases of scarlet fever were discharged as recovered, and 206 deaths from this disease occurred in these hospitals; these 206 deaths were equal to 2·0 per cent. of the 10,437 completed cases during the year, and it is interesting to note that in addition to these 206 deaths only eight fatal cases of scarlet fever were registered in London last year (of which two occurred in the London Fever Hospital), and that the 214 total deaths from this disease were considerably less than half the average annual number registered in London during the preceding nine years 1901–09, and were fewer

than in any previous year for which similar information is available. Of diphtheria, 4415 cases were discharged during last year from these isolation hospitals as recovered, and 360 deaths from this disease occurred therein. These 360 deaths from diphtheria were in the proportion of 8·0 per cent. of the 4775 completed cases of this disease. The total deaths from diphtheria registered in London during last year were 434, of which 360, or 83 per cent., occurred in the Metropolitan Asylums hospitals and three in the London Fever Hospital; in the three preceding years the registered deaths from this disease in London were 781, 724, and 605 respectively, showing a steady decline, which was most marked last year. With regard to the isolation of enteric fever, 521 cases of this disease were discharged during last year from these Metropolitan Asylums hospitals as recovered, and 126 deaths therefrom occurred in these hospitals. These 126 deaths showed a proportion of 19·5 per cent of the 647 cases completed during the year. The number of deaths referred to enteric fever in London during the 52 weeks of last year were 198, of which 126, or 64 per cent., occurred in the Metropolitan Asylums hospitals; these 198 deaths were 107 below the average annual number in the nine preceding years 1901–09, but showed an increase of 52 upon the unprecedentedly low number in 1909. With reference to the case-mortality of these three diseases in the Metropolitan Asylums hospitals, it may be noted that the mortality of scarlet fever has shown a marked and continuous decline in recent years, suggesting a considerably milder type of the disease; whereas the case-mortality of diphtheria and of enteric fever have shown no similar steady decline. It is a fact, however, of which the explanation is not obvious, that the case-mortality during last year of both scarlet fever and diphtheria in the Metropolitan Asylums hospitals was considerably higher than among the comparatively small number of cases under treatment in the London Fever Hospital.

THE DILEMMA OF THE BATTERSEA TOWN COUNCIL.

As will be seen by a note which we publish on p. 279 of our present issue rumblings are still to be heard in Battersea in connexion with the brown dog storm, but the continuance of bad weather predicted by an ex-mayor, who announced that the "memorial would have to be restored by the council before very long," seems likely to be falsified; for an action in the High Court to enforce the contract between members of the International Antivivisection Council and the Mayor, &c., of Battersea with respect to the erection and maintenance of the memorial has resulted in a judgment which enables an alternative weather forecast to be made with confidence. It is, however, unnecessary to devote further space to the matter here. It will be noticed that at the same meeting at which these echoes were heard the subject of supplying the poor of Battersea with diphtheria antitoxin came up for discussion, with the result that the town council, which, be it noted, is the sanitary authority that has charge of the health of the people, postponed for six months the consideration of the opportunities afforded by the recent Order of the Local Government Board which enables diphtheria antitoxin to be supplied and administered gratuitously, though it appears that some of the antivivisectionists and antivaccinationists on the council had misgivings as to whether in the interests of the health of the poor they ought not to take a different view. It would be interesting to know what the intelligent artisans of Battersea think of this act of the council. Although the practice of supplying vaccines and sera through the agency of local authorities is daily increasing, as also is the demand for these substances in relation to numerous diseases, the people of Battersea will be unable to procure them save through private or Poor-law channels. Over and over again have we insisted in these columns upon the enormous importance of the earliest possible employment of the diphtheria antitoxin, and we have drawn attention to the numerous reports of medical officers of health as to the frequency with which diphtheria patients reach the isolation hospital even in advanced disease and no antitoxin has been administered. Our brief report states that two of the medical men on the council were apparently not on the side of the gratuitous supply of antitoxin, and that one of them spoke of the dangers of administering the injection in dirty homes. When the operation is performed carefully this risk cannot be great, not one, we think, that can be considered in any sense commensurate with the dangers of untreated diphtheria.

A REVIEW OF BACTERIOLOGY AND GENERAL PARASITOLOGY.

OUR contemporary, the *Medical Officer*, is to be congratulated on the new venture which accompanies the first issue of the present year. A supplement to the paper, bearing the title "The Review of Bacteriology, General Parasitology, and Allied Subjects in their Relationship to Pa hology and Hygiene," is henceforth to be published at least once in each month. The numbers of papers which appear annually in contemporary scientific journals at home and abroad render the task of keeping up with recent work a matter of great difficulty. To read the specialist reviews published on the continent, and analyses of recent work in pathology, bacteriology, hygiene, tuberculosis, the *Bulletin* of the Pasteur Institute of Paris, and so on, means the perusal of several large volumes annually and entails a knowledge of the French and German languages at any rate. For this reason a summary of such work concisely worded in the English language should meet with a large measure of success. The *Medical Officer* has been fortunate in securing as editor of its review Mr. A. G. R. Foulerton, and it has been decided to publish the supplements so that they can be bound, if desired, separately from the journal itself. The January Supplement contains reviews of 34 papers. The following subjects are dealt with: tuberculosis (7), leprosy (2), typhoid and paratyphoid fever (3), cholera and diphtheria. The recent work on the bacteriology of cerebro-spinal meningitis, broncho-pneumonia in infants, and non-tuberculous diseases of the lungs is passed in review. Then there is an interesting note of Metchnikoff's observations on the flora of the intestines, and of Wollman's on the action of the small intestine on bacteria. The aerobic and anaerobic bacteria of milk and the preservation of butter receive attention, and the laboratory investigations into the etiology of pleuro-pneumonia of cattle are dealt with. Under the heading of protozoology the review deals with the as yet unfinished works on experimental syphilis in the lower animals and with the recent additions to the study of trypanosomiasis.

THE Rizzoli Institute of Orthopædics, Bologna, announces the award of the Humbert I. Prize in Orthopædics for the second quinquennial period ending Dec 31st, 1909, to Professor Wilhelm Schulthess of Zürich for the work "Die Pathologie und Therapie der Rückgratsverkrümmungen" (Jena: Fischer, 1906). The judges were Professor A. Codivilla of Bologna, Professor G. Kirmisson of Paris, and Professor O. Vulpius of Heidelberg.

THE Lettsomian lectures on "A Review of the Operations for Stone in the Male Bladder" will be delivered by Mr. William Frederick Haslam on Feb. 6th and 20th, and March 6th, at 9 P.M., at the rooms of the Medical Society of London, 11, Chandos-street, Cavendish-square, W.

KING EDWARD'S HOSPITAL FUND FOR LONDON.

THE report of the meeting of the Governors and Council of King Edward's Hospital Fund for London, which was held on Dec. 14th at St. James's Palace under the Presidency of the Duke of TECK, will be found on pp. 1852–53 of THE LANCET, Dec. 24th, 1910. The following is a list of the grants recommended by the Distribution Committee. (*Note*—The absence of a grant does not necessarily imply dissatisfaction.)

Alexandra Hospital for Children, £400.
Beckenham Cottage Hospital, £50, £25 of which to renewal of floors.
Belgrave Hospital, £1000, to reduce building debt.
Blackheath and Charlton Cottage Hospital, £100.
Bolingbroke Hospital, £1500.
British Lying-in Hospital, £400.
Catholic Nursing Institute. No grant.
Central London Ophthalmic Hospital, £1000, to rebuilding in accordance with scheme submitted to the Fund.
*Central London Throat and Ear Hospital.
Charing Cross Hospital, £3000.
Chelsea Hospital for Women, £750.
Cheyne Hospital. No grant.
City of London Hospital for Diseases of the Chest, Victoria-park, £4000.
City of London Lying-in Hospital, £500.
Clapham Maternity Hospital, £200.
Dreadnought Hospital, £4000, £1000 of which to reduce debt.
Ealing Cottage Hospital, £500, to rebuilding in accordance with scheme submitted to the Fund.
East End Mothers' Lying-in Home, £500, £250 of which to reduce debt.
East London Hospital for Children, £2000, £250 of which to improvements.
Eltham and Mottingham Cottage Hospital, £100.
Evelina Hospital, £150.
French Hospital, £200.
Friedenheim Hospital, £50.
General Lying-in Hospital, £250.
German Hospital, £200.
Gordon Hospital for Fistula, &c., £25.
Great Northern Central Hospital, £4000, £1000 of which to reduce debt.
Grosvenor Hospital for Women, £350.
Guy's Hospital, £7500, £1500 of which to building improvements in accordance with scheme submitted to the Fund.
Hampstead General Hospital, £3150, £1500 of which to reduce debt and £1650 on account of maintenance and rent, as agreed upon amalgamation with North-West London Hospital.
Home and Infirmary for Sick Children, £250, £50 of which to outside staircase.
Home for Mothers and Babies, Woolwich, £100.
Hospital and Home for Incurable Children, Hampstead, £100, £75 of which to improvements.
Hospital for Consumption, Brompton (including Sanatorium at Frimley), £3000.
*Hospital for Diseases of the Throat.
Hospital for Epilepsy and Paralysis, £750.
Hospital for Invalid Gentlewomen, £200.
Hospital for Sick Children, £4000, £1500 of which to recent improvements in accordance with scheme submitted to the Fund.
Hospital for Women, Soho square, £1000.
Hospital of St. John and St. Elizabeth, £350.
Infants Hospital, £25.
Italian Hospital, £500.
Kensington and Fulham General Hospital (late Queen's Jubilee Hospital). No grant.
Kensington Dispensary and Children's Hospital, £25.
King's College Hospital, £7000, £5000 of which to removal fund.
Leyton, Walthamstow, and Wanstead Children's and General Hospital, £250.
London Fever Hospital, £250.
London Homœopathic Hospital, £500, to rebuilding of Nursing Home in accordance with scheme submitted to the Fund.
London Hospital, £12,000.
London Lock Hospital, £1500, to the Harrow Road Hospital, £1000 of which to reduce debt.
London Temperance Hospital, £1500.
*London Throat Hospital.
Maternity Charity and District Nurses' Home, Plaistow, £100.
Medical Mission Hospital, Balaam-street, Plaistow, £35.
Memorial Hospital, Mildmay Park, £50.
Metropolitan Hospital, £3500, £1000 of which to reduce debt on structural improvements carried out in accordance with scheme submitted to the Fund.
Middlesex Hospital, £4000.
Middlesex Hospital Cancer Charity. No grant. The Committee are glad to see that no assistance from the Fund is required this year.
Mildmay Mission Hospital, £400.
Miller General Hospital for South-East London, £1500, £750 of which to extension, subject to scheme being approved.
Mount Vernon Hospital for Consumption (including Sanatorium at Northwood), £1500.
National Anti-Vivisection Hospital. No grant.
National Dental Hospital, £400, £150 of which to improvements in accordance with scheme submitted to the Fund.
National Hospital for Diseases of the Heart. No grant.
National Hospital for the Paralysed and Epileptic, £1000.
New Hospital for Women, £1500, £750 of which to building improvements in accordance with scheme submitted to the Fund.
Norwood Cottage Hospital, £100.
Paddington Green Children's Hospital, £1750, £1000 of which to reconstruction of Out-patient Department, subject to approval of scheme.
Passmore Edwards Acton Cottage Hospital, £75.
Passmore Edwards East Ham Hospital, £50.
Passmore Edwards Hospital for Willesden, £25.
Passmore Edwards Cottage Hospital, Wood Green, £25.
Poplar Hospital, £400.
Prince of Wales's General Hospital, £4000, £2000 of which to reduce debt.
Queen Charlotte's Lying-in Hospital, £1500, £500 of which to improvements.
Queen's Hospital for Children, £3000, £1250 of which to reduce building debt.
Royal Dental Hospital of London, £1250, £250 of which to recent improvements.
*Royal Ear Hospital.
Royal Eye Hospital, £1000, £250 of which to reduce debt.
Royal Free Hospital, £4000.
Royal Hospital for Diseases of the Chest, City-road, £1250, £250 of which to reduce debt.
Royal Hospital, Richmond, £200, £50 of which to fire-escape balconies.
Royal London Ophthalmic Hospital, £2500.
Royal National Orthopædic Hospital, £7000, £250 of which as agreed upon amalgamation.
Royal Waterloo Hospital for Children and Women, £1500.
St. George's Hospital, £2000. To be retained until the Fund is satisfied that the relations between hospital and medical school are in accordance with the principles intimated by the Fund in March, 1909.
St. John's Hospital for Diseases of the Skin, £600, £500 of which to reduce building debt.
St. John's Hospital, Lewisham, £300.
St. Luke's House, £50.
St. Mark's Hospital, £400, £300 of which to improvements in nursing accommodation in accordance with scheme submitted to the Fund.
St. Mary's Hospital, £6500, of which £2500 to reduce debt.
St. Mary's Hospital for Women and Children, Plaistow, £1500, £1000 of which to enable the new building to be furnished and opened free of debt.
St. Monica's Hospital, £100.
St. Peter's Hospital for Stone, £150.
St. Saviour's Hospital, Osnaburgh-street, £200.
St. Vincent's Home for Crippled Boys. No grant.
Samaritan Free Hospital, £1000.
Santa Claus Home, £25.
South Wimbledon, Merton and District Cottage Hospital, £1000, to the rebuilding of the hospital under the name of the Wimbledon and Merton Hospital, in accordance with scheme submitted to the Fund.
University College Hospital, £5500, £1500 of which to reduce debt.
Victoria Hospital for Children, £1000.
West-End Hospital for Diseases of the Nervous System, £250.
Western Ophthalmic Hospital, £275, to reduction of debt on rebuilding of out-patient department.
West Ham and East London Hospital, £5500, £5000 of which to building fund to enable the new building to be opened free of debt.
West London Hospital, £5000, £2000 of which to reduce debt, on the understanding that special efforts are made to obtain increased support from the public.
Westminster Hospital, £3000.
Wimbledon Cottage Hospital, £550, £500 of which to rebuilding in accordance with scheme submitted to the Fund.

Total of grants to hospitals for the year 1910, including £2000 set aside for amalgamation of throat and ear hospitals, £150,000.

The grants recommended by the Convalescent Homes Committee are as follows:—

Consumption Sanatoriums.

Children's Sanatorium, Holt, Norfolk. No grant. The Committee are glad to see that the balance of the building fund for a permanent sanatorium has been provided by a private donor.
Devon and Cornwall Sanatorium, Didworthy, South Brent, £875, in consideration of the reservation of ten beds during 1911 for the use of certain London hospitals.
Fairlight Sanatorium, Hastings. No grant.
Kelling Sanatorium, Holt, Norfolk, £175, in consideration of the reservation of two beds during 1911 for the use of certain London hospitals.
Maitland Sanatorium, Peppard, Oxon. No grant.
National Association for the Establishment and Maintenance of Sanatoria for Workers, Benenden, Kent, £250 to reduce building debt.
Northampton Sanatorium, Creaton, Northants, £525, in consideration of the reservation of six beds during 1911 for the use of certain London hospitals.
Royal National Hospital for Consumption, Ventnor. No grant.
Total of grants to consumption sanatoriums, £1825.

Convalescent Homes.

Alexandra Hospital for Children, Painswick, £25.
All Saints' Convalescent Home for Children, Highgate, £25.
Baldwin Brown Home for Convalescent Poor, Herne Bay, £25.
Brentwood Convalescent Home for London Children, Brentwood, £25.
Charing Cross Hospital, Limpsfield, £200, £100 of which to reduce debt and £100 maintenance grant with a view to encouraging the admission without payment of patients direct from the hospital.
Chelsea Hospital for Women, St. Leonards, £50, with a view to encouraging the admission without payment of patients direct from the hospital.
Children's Cottage Hospital, Cold Ash, Newbury, £25, in consideration of convalescent cases.
Children's Home Hospital, Barnet, £25, in consideration of convalescent cases.
Convalescent Police Seaside Home, Hove, £50.
Deptford Medical Mission, Bexhill, £25.
East London Hospital for Children, Bognor, £250.
Erskine House, Hampstead Heath, £25.
Great Northern Central Hospital, Clacton-on-Sea, £100.

Home and Infirmary for Sick Children, Sydenham, Broadstairs, £50.
Hospital for Sick Children, Great Ormond-street, Highgate, £225.
King's College Hospital, Hemel Hempstead, £100.
London Hospital, Tankerton, £50.
Mary Wardell Convalescent Home for Scarlet Fever, Stanmore, £25.
Metropolitan Convalescent Institution (Children), Broadstairs, £150.
Metropolitan Convalescent Institution, Walton, £200.
Metropolitan Hospital, Cranbrook, £50.
Middlesex Hospital, Clacton, £400.
Mildmay Mission Hospital, Hendon, £100.
Mrs. Kitto's Free Convalescent Home, Reigate, £50.
National Hospital for the Paralysed, Finchley, £100, with a view to facilitating the admission of patients without payment.
Paddington Green Children's Hospital, Slough, £100.
Poplar Hospital, Walton-on-Naze, £50.
Queen Charlotte's Lying-in Hospital, Kilburn, £50.
St. Andrew's Convalescent Home, Folkestone, £100.
St. Andrew's Convalescent Hospital, Clewer, £50.
St. Mary's Home for Children, Broadstairs, £50, in consideration of convalescent cases.
St. Michael's Home for Men and Women, Westgate-on-Sea, £25.
Sunshine Home of Recovery, Hurstpierpoint, £25.
Surgical Home for Boys, Banstead, £25.
Victoria Home for Invalid Children, Margate, £100 to building, in consideration of convalescent cases.
Victoria Hospital for Children, Chelsea, Broadstairs, £225.
Winifred House Invalid Children's Convalescent Hospital Home, Tollington Park, £25.
Total of grants to convalescent homes, £3175.

* With regard to the throat, nose, and ear hospitals, the committee recommend that the policy of setting aside grants towards amalgamation in place of separate awards to any of the four institutions concerned should still be continued, and they have voted £2000 this year to this purpose.

BRITISH MEDICAL BENEVOLENT FUND.

AT the December meeting of the committee 27 cases were considered and grants amounting to £220 made to 25 of the applicants Appended is an abstract of the cases relieved.

L.S.A., aged 60 years. Is temporarily incapacitated, and when helped earlier in the year was given leave to apply again in six months' time. Relieved once, £10. Voted £5.

M.R.C.S., L.R.C.P., aged 42 years. Is in ill-health and dependent on help from friends. Wife gives music lessons. One child, aged 8. Voted £5.

M.R.C.S., L.R.C.P., aged 47 years Quite incapacitated and dependent on friends. No children. Voted £10.

Widow, aged 50 years, of M.R.C.S., L.S.A. Unprovided for at death of husband six months ago and has been obliged to give up a post as companion on account of a nervous breakdown. No children. Voted £5.

Widow, aged 61 years, of M.R.C.S., L.S.A. Husband's savings were exhausted by a three years' illness preceding death, and applicant endeavours to support herself by taking boarders. Seven children, but one an invalid and the others only just self-supporting. Voted £12.

Widow, aged 53 years, of L.R.C.P., L.R.C.S. Edin. No income; no children; lets lodgings. Voted £5.

Widow, aged 64 years, of M.R.C.S., L.S.A. Lost her husband a few months ago after a long illness and is endeavouring to obtain resident patients or paying guests. Voted £6.

Daughter, aged 55 years, of late M.D. Aberd. Has supported herself until recently, but is now broken down in health. Voted £10.

Widow, aged 70 years, of M.R.C.S., L.R.C.P. Slight provision made by husband has to be supplemented by gifts from friends and is quite inadequate for present unavoidable expenses due to illness. Voted £5.

Widow, aged 59 years, of M.R.C.S., L.S.A. No income and has exhausted the proceeds of the sale of her furniture. Health very feeble. Relieved once, £16. Voted £10.

Widow, aged 75 years, of M.R.C.S. Dependent on an Old Age Pension and occasional gifts from friends. Relieved twice, £24. Voted £12.

Widow, aged 69 years, of M.R.C.S. No income and dependent for a home on a son-in-law, who can ill afford to assist. Relieved once, £10. Voted £10.

Widow, aged 49 years, of M.R.C.S. Husband's means exhausted by a long illness ending in death, and applicant is endeavouring to establish a boarding-house. Relieved once, £10. Voted £10.

Widow, aged 52 years, of M.R.C.S. Nursed her husband for several years before his death, and is now herself incapacitated and a candidate for a pension from a Home for Incurables. Dependent on two sons whose earnings are very small. Relieved seven times, £92. Voted £10.

Widow, aged 51 years, of L.S.A. No income and health too uncertain to attempt regular employment. Two daughters, aged 18 and 16, the latter having just obtained a post as governess. Relieved five times, £46. Voted £12.

Widow, aged 66 years, of L.R.C.P. Only income a few shillings a week from a house, if let. No children. Relieved 11 times, £126. Voted £12.

Widow, aged 75 years, of M.D. Glasg. Endeavours to support herself by taking lodgers, but is unable to pay her rent which is considerably overdue. Relieved seven times, £36. Voted £5.

Daughter, aged 64 years, of late M.D. Edin. Has supported herself for many years as a companion, but is now dependent on this Fund and another charitable society. Relieved six times, £72. Voted £12.

Daughter, aged 70 years, of late L.R.C.S., L.S.A. Takes boarders but finds it impossible to make both ends meet and is in arrears with her rent. Relieved three times, £20. Voted £10.

Widow, aged 54 years, of L.R.C.P., L.R.C.S. Edin. No income and is in very bad health. Children only able to give slight help. Relieved four times, £48. Voted £12.

Widow, aged 66 years, of M.R.C.S. Receives a pension from Epsom College and requires a little help in consequence of the unavoidable withdrawal of assistance by friends. Relieved six times, £54. Voted £10.

Widow, aged 65 years, of M.R.C.S. Dependent on the help of two relations and small profits from a boarder, if able to obtain one. No children. Relieved once, £6. Voted £6.

Widow, aged 65 years, of L.R.C.P., L.R.C.S. Edin. Has supported herself since husband's death several years ago, but is now crippled by rheumatoid arthritis and dependent on a sister who is a teacher. Relieved once, £12. Voted £12.

Daughter, aged 63 years, of late M.D. Edin. Gave up a post as companion to nurse an elder sister who is a permanent invalid and is dependent on this Fund and a small yearly grant from an old friend. Relieved five times, £60. Voted £12.

Daughter, aged 40 years, of late F.R.C.S. No income and unable to follow any regular occupation on account of ill-health. Relieved ten times, £96. Voted £2 and case to be reconsidered in a month's time.

Contributions may be sent to the honorary treasurer, Dr. Samuel West, 15, Wimpole-street, London, W.

Looking Back.

FROM

THE LANCET, *SATURDAY*, Jan. 26th, 1833.

ARTIFICIAL MODE OF INDUCING PARTURITION.

IN the annual statements just published by Professor Ciniselli of Pavia, regarding the clinical events in the obstetric establishment of that university, there is a case of artificial delivery at the eighth month, successfully induced by the introduction of a sponge dilator into the mouth of the uterus. The sponge first employed was about an inch long, and the thickness of a quill. When its increase of size had dilated the orifice to a certain extent, another, a little larger, was substituted for the first, and with the same effect. In the course of forty-eight hours four sponges were employed, when the delivery was accomplished by the natural contractions of the uterus, and with safety to mother and child.

PERSIAN OPIUM.—Dr. EPPS has sent to our office a specimen of a new kind of opium, adding a fifth,—the Persian,—to the four which we already possess, the Turkey, the East Indian, the Egyptian, and the European. "It has been imported into this country," he observes, "only very lately, and the specimen is one of the first parcel imported. It comes from Trebizond, in Persia, and was obtained from Messrs. Yeatman and Linn, chemists, of Fore-street, City. It is in small cylindrical pieces, rolled in polished paper, at one end closed with cotton, at the other partially open. Its colour is *reddish-brown*, and in this character it approaches to the best opium, though much lighter in colour than the Turkey. It has a very fetid, heavy smell, and a bitter, acrid taste. It would appear from its sensible qualities to be very valuable and active, and, it is to be remembered, that a great part of the 'Turkey opium,' as it is called, comes from Persia."

VITAL STATISTICS.

VITAL STATISTICS FOR 1910.

THE following are the provisional figures showing the birth-rates and death-rates in England and Wales in the year 1910:—

—	Annual rates per 1000 living.				Deaths under one year to 1000 births.
	Births.	Deaths.		Principal epidemic diseases.	
	*	Crude.	Corrected.*		
England and Wales	24·8	13·4	13·4	0·99	106
77 great towns ...	25·0	13·4	14·3	1·23	115
136 smaller towns	23·7	12·4	12·9	0·88	104
England and Wales less the 213 towns	25·0	13·6	12·8	0·74	96

* The corrected death-rates are the rates which would have been recorded had the age and sex constitution of the populations of the several areas been identical with that of England and Wales as enumerated in 1901.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns 8374 births and 5411 deaths were registered during the week ending Jan. 21st. The annual rate of mortality in these towns, which had been equal to 14 3 and 15 5 per 1000 in the two preceding weeks, further rose to 16·4 in the week under notice. During the first three weeks of the current quarter the death-rate in these towns averaged 15·4 per 1000. In London

the mean death-rate during the same period was equal to 15·5. The annual death-rates in the 77 towns during last week ranged from 7·1 in King's Norton, 7·7 in Handsworth, 9·3 in West Hartlepool, and 9·9 in Gateshead, to 21·0 in Bury, 21·4 in Coventry, 23·0 in Middlesbrough, and 25·1 in Stockton-on-Tees. The 5411 deaths from all causes in the 77 towns last week showed a further increase of 308 on the numbers returned in the three preceding weeks, and included 455 which were referred to the principal epidemic diseases, against 392 and 448 in the two preceding weeks; of these 455 deaths from epidemic diseases, 204 resulted from measles, 85 from whooping-cough, 68 (of infants under two years of age) from diarrhœa and enteritis, 63 from diphtheria, 20 from scarlet fever, and 15 from enteric fever, but not one from small-pox. The fatal cases of measles, which had been 160 and 191 in the two preceding weeks, further rose last week to 204, and caused the highest annual rates, 1·9 in Tottenham, Coventry, and Middlesbrough, 2·2 in Oldham, and 2·6 in Sheffield. The 85 deaths from whooping-cough were within two of the number in the previous week, and caused rates equal to 1·1 in Leyton, and 1·2 in Willesden, in Reading, and in York. The 68 deaths of infants under two years from diarrhœa and enteritis showed an increase of 12 upon the number returned in the previous week. The fatal cases of diphtheria, which had been 76 and 63 in the two previous weeks, were again 63 last week, of which 20 occurred in London and its suburban districts, 4 in Birmingham, 5 in Manchester and Salford, and 3 each in Portsmouth, Leeds, Cardiff, and Swansea. The 20 fatal cases of scarlet fever showed a decline of 11 from the number in the previous week; they included 5 in London, 4 in Liverpool, and 3 in Stoke-on-Trent. The deaths referred to enteric fever, which had been 24 and 20 in the two preceding weeks, further declined last week to 15; 2 each were returned in London, Stoke-on-Trent, and Liverpool. The number of scarlet fever patients under treatment in the Metropolitan Asylums and the London Fever Hospital, which had steadily declined in the ten preceding weeks from 1882 to 1410, had further fallen to 1349 on Saturday last; 126 new cases of this disease were admitted to these hospitals during the week, against 154 and 135 in the two preceding weeks. These hospitals also contained on Saturday last 834 cases of diphtheria, 271 of measles, 118 of whooping-cough, and 72 of enteric fever. The 1613 deaths from all causes in London last week (showing a further increase of 177 upon recent weekly numbers) included 366 which were referred to diseases of the respiratory system, against 263, 289, and 292 in the three preceding weeks. In the 77 towns 169 deaths resulted from different forms of violence, against 180 in each of the two previous weeks; and 433 inquest cases were registered. The causes of 37, or 0·7 per cent., of the deaths registered during the week in the 77 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Manchester, Leeds, Bristol, West Ham, Bradford, Newcastle-on-Tyne, Stoke-on-Trent, Salford, and in 51 other smaller towns; the 37 uncertified causes of death in the 77 towns last week included 9 in Liverpool, 5 in Birmingham, 3 in Barrow-in-Furness, and 2 each in Reading, Rochdale, Burnley, Sheffield, and South Shields.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns 836 births and 544 deaths were registered during the week ending Jan. 21st. The annual rate of mortality in these towns, which had been equal to 14·3 and 16·6 per 1000 in the two previous weeks, declined again to 14·8 in the week under notice. During the first three weeks of the current quarter the death-rate in these towns averaged 15·2 per 1000, and was 0·2 below the mean rate during the same period in the 77 English towns. The annual death-rates during last week in the eight Scotch towns ranged from 11·1 and 11·5 in Perth and Paisley to 17·6 in Greenock and 17·7 in Dundee. The 544 deaths from all causes in the eight towns last week showed a decline of 67 from the number returned in the previous week, and included 43 which were referred to the principal epidemic diseases, against 56 and 51 in the two previous weeks; these 43 deaths were equal to an annual rate of 1·2 per 1000, the highest epidemic rates being 1·5 in Glasgow and 3·6 in Leith. Of these 43 deaths from the principal epidemic diseases, 20 resulted from whooping-cough, 13 from diarrhœa, 6 from diphtheria, and 2 each from scarlet fever and enteric fever, but not one either from measles or from small-pox. The fatal cases of whooping-cough, which had been 20 and 18 in the two previous weeks, increased again to 20 last week, of which 12 occurred in Glasgow, 4 in Leith, and 2 in Edinburgh. The 13 deaths attributed to diarrhœa corresponded with the number in the previous week, and included 10 of infants under two years of age; 6 deaths from this cause occurred in Glasgow, and 2 both in Dundee and Leith. The deaths referred to diphtheria, which had been 14 and 9 in the two previous weeks, further declined to 6 last week, of which 4 were returned in Glasgow and 2 in Dundee. The 2 fatal cases of scarlet fever and the 2 deaths referred to enteric fever all occurred in Glasgow; the fatal cases of scarlet fever showed a further decline from the numbers in recent weeks. The deaths in the eight towns referred to diseases of the respiratory system, which had been 92, 98, and 130 in the three preceding weeks, declined again to 121 last week, but exceeded by 20 the number in the corresponding week of last year. The deaths resulting from different forms of violence in the eight towns declined to 15 last week, from 19 and 26 in the two previous weeks; and 161, or 30 per cent., of the deaths occurred in public institutions. The causes of 15, or 2·8 per cent., of the deaths in the eight towns last week were not certified or not stated; in the 77 largest English towns the proportion of uncertified causes of death last week did not exceed 0·7 per cent.

HEALTH OF IRISH TOWNS.

In Dublin 238 births and 183 deaths were registered during the week ending Jan. 21st. The annual rate of mortality in the city, which had been equal to 21·5 and 21·4 per 1000 in the two preceding weeks, increased to 23·4 in the week under notice. During the first three weeks of the current quarter the annual death-rate in the city averaged 22·1 per 1000, whereas in London the mean death-rate during the same period did not exceed 15·5 per 1000. The 183 deaths from all causes in Dublin last week showed an increase of 16 upon the number in the previous week, and included 18 which were referred to the principal epidemic diseases, of which 6 resulted from whooping-cough, 5 from measles, 4 from diphtheria, and 3 (of infants aged under two years) from diarrhœa and enteritis, but not one from small-pox, scarlet fever, or enteric fever. The fatal cases of whooping-cough, measles, and diphtheria somewhat exceeded the numbers in the previous week. The deaths from all causes included 36 of infants under one year of age, and 43 of persons aged upwards of 65 years; 70, or 38 per cent., of the deaths were recorded in public institutions. The causes of 7, or 3·8 per cent., of the deaths in the city during the week were not certified either by a registered medical practitioner or by a coroner. In Belfast 233 births and 118 deaths were registered during last week. The 118 deaths in this city were equal to an annual rate of 15·4 per 1000, against 16·0 and 19·8 in the two preceding weeks. During the first three weeks of the current quarter the annual death-rate in Belfast averaged 17·1 per 1000, against 22·1 in Dublin during the same period. The 118 deaths from all causes in this city during last week showed a decline of 33 from the number in the previous week, and included 4 which were referred to the principal epidemic diseases, of which 1 each resulted from measles, scarlet fever, whooping-cough, and diphtheria; no fatal case of enteric fever, diarrhœa, or small-pox was registered. One death was referred to violence and 2 were registered on the information of the coroner; 27, or 23 per cent., of the deaths occurred in public institutions. The causes of all but one of the 118 deaths in the city last week were duly certified either by a registered medical practitioner or by the coroner.

VITAL STATISTICS OF LONDON DURING DECEMBER, 1910.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious disease, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 4·3 per 1000 of the population, estimated at 4,872,702 persons in the middle of last year. In the three preceding months the rates

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING DECEMBER, 1910.

(Specially compiled for THE LANCET.)

Cities and Boroughs.	Estimated population in the middle of 1910.	Notified Cases of Infectious Disease.											Deaths from Principal Infectious Diseases.											Deaths from all causes.	Death-rate per 1000 living.†
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cerebro-spinal meningitis.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.		
LONDON...	4,872,702	—	691	432	—	98	—	27	354	7	1607	4·3	—	322	6	56	55	—	18	—	75	532	1·4	5592	15·8
West Districts.																									
Paddington	153,004	—	13	6	—	5	—	—	12	—	36	3·1	—	6	—	2	3	—	—	—	3	14	1·2	181	16·4
Kensington	184,635	—	10	17	—	2	—	1	13	—	43	3·0	—	18	—	2	4	—	—	—	3	27	1·9	235	17·9
Hammersmith	127,413	—	13	17	—	4	—	1	1	—	36	3·7	—	13	—	6	2	—	1	—	3	25	2·6	160	17·1
Fulham	181,282	—	30	11	—	1	—	—	5	—	47	3·4	—	8	—	—	1	—	—	—	2	11	0·8	156	11·7
Chelsea	75,457	—	6	3	—	—	—	—	2	—	11	1·9	—	—	—	1	—	—	—	—	—	1	0·2	91	16·3
City of Westminster	167,233	—	6	7	—	1	—	1	7	—	22	1·7	—	4	—	1	1	—	—	—	—	6	0·5	193	16·8
North Districts.																									
St. Marylebone	125,195	—	23	13	—	—	—	1	10	—	47	4·9	—	8	—	—	—	—	—	—	3	11	1·1	137	15·2
Hampstead	95,729	—	6	10	—	1	—	—	3	—	20	2·7	—	1	—	1	2	—	1	—	2	7	1·0	88	13·5
St. Pancras	237,782	—	29	17	—	7	—	4	18	1	76	4·2	—	17	1	5	2	—	—	—	4	29	1·6	279	16·0
Islington	353,356	—	57	47	—	3	—	2	21	1	131	4·8	—	55	1	4	6	—	2	—	5	73	2·7	429	16·4
Stoke Newington	54,838	—	6	3	—	—	—	2	8	—	19	4·5	—	3	—	1	1	—	—	—	—	5	1·2	52	12·9
Hackney	239,979	—	45	25	—	7	—	—	32	1	110	6·0	—	5	—	2	3	—	2	—	5	17	0·9	245	13·9
Central Districts.																									
Holborn	53,142	—	5	3	—	3	—	—	8	—	19	4·7	—	4	—	—	—	—	1	—	1	6	1·5	75	19·8
Finsbury	94,578	—	13	21	—	—	—	2	13	—	49	6·8	—	26	—	6	2	—	—	—	3	37	5·1	161	23·0
City of London	17,132	—	4	—	—	—	—	1	3	—	8	6·1	—	—	—	—	—	—	—	—	—	—	—	21	17·6
East Districts.																									
Shoreditch	114,387	—	9	10	—	3	—	—	10	1	33	3·8	—	8	—	2	3	—	—	—	3	16	1·8	172	20·6
Bethnal Green	131,579	—	6	16	—	12	—	—	20	—	54	5·3	—	2	—	4	2	—	3	—	3	14	1·4	180	18·0
Stepney	314,379	—	42	32	—	6	—	2	42	—	124	5·1	—	14	—	3	—	—	1	—	6	24	1·0	348	15·0
Poplar	172,432	—	37	14	—	8	—	1	16	—	76	5·7	—	5	2	2	2	—	—	—	4	15	1·1	208	16·2
South Districts.																									
Southwark	211,832	—	35	21	—	5	—	—	19	—	80	4·9	—	27	—	4	3	—	1	—	4	39	2·4	309	19·9
Bermondsey	127,238	—	23	17	—	1	—	—	11	—	52	5·3	—	22	—	1	3	—	—	—	2	28	2·9	188	19·8
Lambeth	327,074	—	46	23	—	5	—	3	16	1	94	3·7	—	28	—	4	6	—	3	—	—	39	1·6	356	14·6
Battersea...	188,222	—	20	19	—	1	—	3	13	—	56	3·9	—	19	—	—	1	—	—	—	4	24	1·7	224	16·6
Wandsworth	305,838	—	42	25	—	5	—	1	16	2	91	3·9	—	8	1	2	4	—	1	—	2	18	0·8	306	13·7
Camberwell	286,068	—	53	21	—	10	—	—	13	—	97	4·4	—	18	—	1	3	—	2	—	5	29	1·3	287	13·6
Deptford	119,642	—	13	8	—	—	—	—	10	—	31	3·4	—	3	—	—	—	—	—	—	1	4	0·4	113	12·9
Greenwich	112,935	—	15	5	—	1	—	1	1	—	23	2·7	—	—	1	2	—	—	—	—	2	5	0·6	101	11·9
Lewisham	164,899	—	39	15	—	2	—	1	2	—	59	4·7	—	—	—	—	1	—	—	—	1	2	0·2	153	12·6
Woolwich...	135,422	—	45	6	—	2	—	—	8	—	61	5·9	—	2	—	—	—	—	—	—	4	6	0·6	146	15·1
Port of London	—	—	—	—	—	1	—	—	1	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

† The death-rates are corrected for variations in sex- and age-constitution of the populations of the several boroughs, the population of England and Wales being taken as the standard.

were 5·3, 5·9, and 5·0 per 1000 respectively. The lowest rates last month were recorded in Paddington, Kensington, Chelsea, the City of Westminster, Hampstead, and Greenwich; and the highest rates in Hackney, Finsbury, the City of London, Bethnal Green, Stepney, Poplar, Bermondsey, and Woolwich. Scarlet fever again showed a declining prevalence last month; among the several metropolitan boroughs the greatest proportional prevalence of this disease was recorded in St. Marylebone, Hackney, the City of London, Poplar, Bermondsey, Camberwell, Lewisham, and Woolwich. The Metropolitan Asylums Hospitals contained 1574 scarlet fever patients at the end of December, against 1825 and 1727 at the end of the two preceding months; the weekly admissions averaged 155, against 229, and 183 in the two preceding months. Diphtheria also was less prevalent than it had been in any of the three preceding months; this disease was proportionally most prevalent last month in Finsbury, Hammersmith, Islington, Bethnal Green, and Bermondsey. There were 827 diphtheria patients under treatment in the Metropolitan Asylums Hospitals at the end of last month, against 852 and 866 at the end of the two preceding months; the weekly admissions averaged 95, against 120 and 106 in the two preceding months. The prevalence of enteric fever showed a slight decline from that recorded in the preceding month; among the several metropolitan boroughs the greatest proportional prevalence of this disease was recorded in Paddington, Hammersmith, St. Pancras, Hackney, Holborn, Bethnal Green, Poplar, and Camberwell. The number of enteric fever patients under treatment in the Metropolitan Asylums Hospitals, which had been 169 and 134 at the end of the two preceding months, had declined to 88 at the end of last month; the weekly admissions averaged 11, against 25 and 16 in the two preceding months. Erysipelas was proportionally most prevalent in the City of London, Holborn, Finsbury, Bethnal Green, and Stepney. The 27 cases of puerperal fever notified during the month included 4 in St. Pancras, 3 in Lambeth, 3 in Battersea, and 2 each in Islington, Stoke Newington, Finsbury, and Stepney. The 7 cases of cerebro-spinal meningitis included 2 in Wandsworth, and 1 each in St. Pancras, Islington, Hackney, Shoreditch, and Lambeth.

The mortality statistics in the table relate to the deaths of persons actually belonging to the several boroughs, the deaths occurring in institutions having been distributed among the boroughs in which the deceased persons had previously resided; the death-rates are further corrected for variations in the sex and age constitution of the populations. During the four weeks ending Dec. 31st the deaths of 5592 persons belonging to London were registered, equal to a corrected annual rate of 15·8 per 1000, the rates in the three preceding months having been 11·9, 12·6, and 17·4 respectively. The death-rates last month ranged from 11·7 in Fulham, 11·9 in Greenwich, 12·6 in Lewisham, and 12·9 in Stoke Newington and in Deptford, to 18·0 in Bethnal Green, 19·8 in Holborn and in Bermondsey, 19·9 in Southwark, 20·6 in Shoreditch, and 23·0 in Finsbury. The 5592 deaths from all causes included 532 which were attributed to the principal infectious diseases; of these, 322 resulted from measles, 6 from scarlet fever, 56 from diphtheria, 55 from whooping-cough, 18 from enteric fever, and 75 from diarrhœa. No death from any of these infectious diseases was recorded last month in the City of London; among the metropolitan boroughs they caused the lowest death-rates in Chelsea, City of Westminster, Deptford, Greenwich, Lewisham, and Woolwich; and the highest rates in Hammersmith, Islington, Finsbury, Southwark, and Bermondsey. The 322 deaths from measles were 187 in excess of the corrected average number in the corresponding period of the five preceding years; this disease was proportionally most fatal in Kensington, Hammersmith, Islington, Finsbury, Southwark, Bermondsey, Lambeth, and Battersea. The fatal cases of scarlet fever numbered 6 last month, the average number being 49; of these 6 deaths, 2 belonged to Poplar, and 1 each to St. Pancras, Islington, Wandsworth, and Greenwich. The 56 deaths from diphtheria were 8 fewer than the corrected average number; the greatest proportional mortality from this disease was recorded in Hammersmith, St. Pancras, Finsbury, Bethnal Green, and Southwark. The 55 fatal cases of whooping-cough showed a decline of 30 from the corrected average number; this disease was proportionally most fatal in Paddington, Kensington, Hampstead, Finsbury, Shoreditch, and Bermondsey. The 18 deaths from enteric fever were 2 below the average for the corresponding period of the five preceding years; these 18 deaths included 3 belonging to Bethnal Green, 3 to Lambeth, and 2 each to Islington, Hackney, and Camberwell. The 75 fatal cases of diarrhœa were 20 in excess of the corrected average number; this disease was proportionally most fatal in Hammersmith, St. Marylebone, Finsbury, Shoreditch, Poplar, and Woolwich. In conclusion, it may be stated that the aggregate mortality in London last month from these principal infectious diseases was 30·9 per cent. above the average.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been notified:—Fleet-Surgeons: E. H. Meaden to the *Orontes*; F. Fedarb to the *Hecla*; and N. L. Richards to the *Mars*. Staff-Surgeon: A. J. Hewitt to the *Blake*. Surgeon: A. S. Paterson to the *Jupiter*, additional.

ROYAL ARMY MEDICAL CORPS.

Colonel S. C. B. Robinson, from Jubbulpore, has taken over duty as Principal Medical Officer of the First (Peshawar) Division. Lieutenant-Colonel R. R. H. Moore has been transferred from the Southern Command to the Irish Command and appointed Administrative Medical Officer at Belfast in succession to Lieutenant-Colonel E. J. R. Risk. Lieutenant-Colonel A. E. Tate, from Kasauli, has taken over command of the station hospital at Ambala Cantonment. Lieutenant-Colonel T. E. Noding, in charge of the Military Hospital at Cork, has been placed under orders for duty in the Southern Command, joining about March 1st next. Major J. H. Campbell, D.S.O., on arrival home from Mauritius, has been appointed to the London District. Major G. H. Goddard, from Alderney, has been posted to the Eastern Command and appointed medical officer in charge of the Military Families Hospital at Shorncliffe. Major W. W. O. Beveridge, D.S.O., on completion of the tenure of his appointment as medical officer in charge of the Royal Army Clothing Factory at Pimlico, has been appointed Specialist in Sanitation, London District, for duty in connexion with food inspection and analysis. Major W. J. Taylor, at present serving at Holywood, has been placed under orders to embark for service in Sierra Leone. Major G. A. T. Bray, from Southampton, has taken up duty at Maidstone. Captain W. D. C. Kelly has succeeded Captain J. W. West as Specialist in Advanced Operative Surgery, Dublin District, on the latter's departure for India. Captain J. W. Langstaff has been granted four weeks' leave of absence. Captain R. N. Hunt, from Borden, has been placed under orders for duty in Egypt. Captain H. W. Farebrother, from Malapuram, Madras Presidency, has taken up duty at Bargalore. Captain J. P. Lynch, on completion of a tour of service in India, has been posted to the Eastern Command. Captain E. J. Elliot, on return from Tientsin, North China, has been posted to the Northern Command. Captain P. J. Marett has arrived home on leave from Malta. Captain B. S. Bartlett, from Colchester, has been appointed to the station hospital at Multan for duty. Captain A. M. MacLaughlin, sanitary officer of the Scottish Command, has been appointed to officiate as Medical Inspector of Recruits during the absence on leave of Lieutenant-Colonel M. T. Yarr. Captain S. M. Adye-Curran and Captain J. G. Foster have embarked for a tour of service in India. Captain T. S. Coates has been transferred from Queenstown to Woolwich. Captain G. E. Cathcart, from Lancaster, has taken up duty at Warrington. Captain D. C. O'Grady has been appointed specialist in dermatology and venereal diseases to the Second (Rawalpindi) Division. Lieutenant J. B. Jones from Londonderry, has on arrival in India been posted to the station hospital at Lucknow. Lieutenant S. McK. Saunders, from Woolwich, has joined for duty at Cairo. Lieutenant W. W. Treves and Lieutenant R. F. Bridges have been posted to the Eastern Command. Lieutenant C. K. H. Harold has been appointed for duty in the London District from the Aldershot Command.

INDIAN MEDICAL SERVICE.

Colonel F. C. Reeves has been appointed by the Commander-in-Chief in India to be Principal Medical Officer of the Secunderabad Brigade, in succession to Colonel H. St. Clair Carruthers, transferred to the Civil Medical Department. Lieutenant-Colonel E. W. Thurston, Bombay Presidency, has arrived home on leave. Lieutenant-Colonel F. J. Drury, Principal of the Medical College at Calcutta, has been deputed for special duty with the Principal Medical Officer of the Eighth (Lucknow) Division. Lieutenant-Colonel E. R. W. C. Carroll has taken up duty as Civil Surgeon at Lakhimpur, Eastern Bengal, in succession to Major A. Leventon, appointed civil surgeon at Darrang. Major W. D. Hayward, civil surgeon at Jaipajuri, has been appointed Medical Storekeeper to the Government of India, vice Lieutenant-Colonel E. Dobson. Major E. H. Sharman, on return from leave, has taken over duty as staff officer for Medical Mobilisation Stores Fourth (Quetta) Division from Lieutenant-Colonel C. M. C. Wimberly. Major S. Evans has been selected to officiate as Obstetric Physician to the Parsi Hospital at Bombay. Major M. Dick, civil surgeon, Burma, has been appointed to officiate as a First-class Civil Surgeon. The Governor of Bombay has appointed Major T. S. Novis to act as Professor of Anatomy and Curator of the Museum, Grant Medical College, Bombay, vice Captain L. P. Stephen, pending further orders. Captain S. B. Mehta, district plague medical officer, Lyallpur, has been transferred to Rohtak. The services of Captain R. A. Chambers have been replaced at the disposal of the Home Department of the Government of India. Captain G. Fowler, civil surgeon of Akola, has been appoined to the executive and medical charge of the Akola District Jail. Captain A. H. Proctor, Captain H. Falk, and Captain K. W. Mackenzie have embarked for India in the transport ss. *Rewa* from Southampton. Lieutenant L. H. L. Mackenzie has been attached as medical officer to the 72nd Punjabis at Dera Ismail Khan. Lieutenant A. C. Munro has taken over duty as Specialist in Ophthalmology to the Seventh (Meerut) Division.

TERRITORIAL FORCE.

Royal Army Medical Corps.

3rd Northumbrian Field Ambulance, Royal Army Medical Corps: The undermentioned officers to be Captains: Lieutenant Oswald L. Appleton (dated August 9th, 1910). Lieutenant Percy R. Ash (dated August 19th, 1910).

Attached to Units other than Medical Units.—Captain John Paton resigns his commission (dated Jan. 21st, 1911).

DEATHS IN THE SERVICES.

Colonel J. A. Cunningham, I.M.S. (on Dec. 31st, 1910), who was only recently appointed Inspector-General of Civil Hospitals in the Central Provinces. He was appointed surgeon in 1881 and lieutenant-colonel in 1901. Colonel Cunningham arrived at Calcutta from Nagpur on Dec. 24th for the Christmas holidays, and was seized with cholera two days later, the disease being probably contracted on the railway journey. He failed to rally, and his death occurred in the General Hospital at Calcutta. His personality had won for himself a wide circle of friends both in India and at home. Before his recent appointment he filled the important post of civil surgeon at Lahore, where his loss will also be deeply mourned.

THE HEALTH OF THE ARMY.

At a meeting of the National Service League held at Hale, near Farnham, on Jan. 18th, Sir Thomas Gallwey, K.C.M.G., A.M.S., principal medical officer of the Aldershot Command, said that he had recently drawn up a report on the health of the army for 1910. The making of that report had forcibly impressed upon him the fact that the present excellent health, both physical and mental, was due to the physical training and discipline which had been introduced since the South African war. The British soldier of the present day was more intelligent and active and better in every way than in the old days. Last year the men admitted to hospital were only half in number in comparison with those admitted in the previous five years. The waste of the army also showed a striking decrease. This last year when he made up the returns he found a reduction of nearly two-thirds, the actual rate being 9 per 1000.

THE ROYAL NAVY LIST.

Among the books of reference which have earned for themselves the title of indispensable a place must be found for the Royal Navy List, published by Messrs. Witherby and Co., the 113th quarterly volume of which has just been issued. The information given in this book concerning the Royal Navy and its *personnel*, both active and retired, and the ships of the fleet, is arranged in a manner at once concise and easy for immediate reference, while the current history of the Royal Navy, a summary of the commissions of ships, and a naval bibliography considerably enhance the value of the List. An addendum corrects the list of officers and their services up to the middle of January. The war and meritorious service section deals with the careers of over 14,500 officers, the information for the most part being contributed by the officers themselves. The publishers are to be congratulated upon the accuracy and arrangement of the book.

ANNUAL REPORT OF THE SURGEON-GENERAL OF U.S. NAVY.

The annual reports of the Surgeons-General of the three Government services of the United States—the Army, the Navy, and the Marine Hospital Service—always teem with varied and interesting information, of value, partly substantive, partly for comparison, far beyond the confines of the Government to which they are rendered. The annual report of the Surgeon-General of the U.S. Navy for the fiscal year 1910 well repays perusal. The improvement that is taking place all the world over in the care bestowed on those who risk their lives and limbs in the service of their country, as well as in the attention devoted to keeping them in the most effective condition for the purpose for which they exist, is well mirrored therein. We note first a generally diminished damage ratio, as compared with that of the preceding year and of the average of the preceding ten years. The death-rate of 5 per 1000 is lower than has ever been previously recorded. Deaths from drowning appear to be too numerous, and call forth a suggestion that after enlistment, warrant, or commission each man shall be required to demonstrate his ability to swim a substantial distance and to keep his head above water for 15 minutes in the presence of a light breeze. The necessity for "study appointments" to naval hospitals and in civil communities is insisted on, and the encouragement of specialism along certain lines is justified. The establishment of assistant surgeons in the U.S. navy is still undermanned, this fact being attributed, in considerable part at least, to the pay of that rank being below that of officers of equal rank in other services. The difficulty that besets the amateurish system of keeping down the enrolled strength by relying on the power to fill up the establishment with civil practitioners in times of emergency—a practice with respect to Government medical services which a false economy renders tempting to politicians in countries other than the United States—is well illustrated by Surgeon-General Stokes, when he says that it seems to require a considerable number of years for officers to appreciate the fact that a medical officer's rightful duties are manifold, and that administrative, executive, and recruiting activities are quite as much functions of the medical corps as are those of the sick-room and the clinical laboratory. Much attention, apparently, is paid in the U.S. navy to venereal prophylaxis, and the dental work done is also considerable—matters the importance of which to an efficient *personnel* can hardly be denied. Stress is laid on the value of the services that can be rendered by the naval medical corps in times of national emergency other than warfare, and on the aid capable of being given by them to the elucidation of many problems in tropical medicine. Of the prominent hygienic problems of the service importance is attached to the increase in physical training, and the Surgeon-General recommends the adoption of the Swedish system as at present in use in the British navy. With regard to athletics, the conclusion is advanced, as a result of data obtained by both American and European authorities, that not only is participation in the customary athletic contests unnecessary for the development of the best physique, but that the average man, who is more rationally and evenly developed by conservative and recreative gymnastics, without the undue enlargement of the heart muscle that commonly follows specialism in football and rowing, will live longer and be more resistant to disease and will thereby be enabled to render better service. In view of the high admission rate from typhoid fever in the U.S. navy the experience of English, German, and American statistics is adduced in favour of as much typhoid preventive inoculation as can be

effected, at first without compulsion. The special diseases demanding watchfulness in the navy are divided for purposes of consideration into—(1) affections dependent on probable predisposition; (2) those dependent on environment of recruits; (3) those dependent on ship life; (4) those dependent on exotic exposure; and (5) those dependent on special conditions of service. In Group 1 are named hernia, hæmorrhoids and varicocele, astigmatism, enlarged tonsils, flat-foot, epilepsy, middle-ear disease, tuberculosis, potential insanity, incontinence of urine, and previous appendicitis; in Group 2, contagious diseases; in Group 3, epidemic catarrh, acute bronchitis, influenza, tonsillitis, mumps, diphtheria, cerebro-spinal meningitis, pulmonary tuberculosis, heat exhaustion, and thermic fever; in Group 4, typhoid, malaria, dysentery, and skin diseases, especially scabies; and in Group 5, various forms of mental derangement, appendicitis and peritonitis, acute and chronic nephritis, and various infectious and contagious diseases. Among the recommendations made are the establishment of a naval medical reserve corps, the adoption of a readily washable texture and colour for all service uniforms for officers and men, and the search in recruiting for histories of prior appendicitis, urinary incontinence, and a family history of nervous and mental disease. The services rendered by the improvised naval hospital ships *Relief* and *Solace* have, in the Surgeon-General's opinion, demonstrated their great usefulness in times of peace and their close relationship to preparedness for war. Specially built hospital ships, containing 500 beds each, and having oil burners, turbine engines, a cruising speed of the fastest battle-ship, and a wide steaming radius, are called for. Such ships should be commissioned in time of peace, not only to provide drill in organisation, equipment, provisioning, signals, &c., but, above all, clearly to establish a condition of unblemished neutrality according to the Geneva Convention. The Surgeon-General, when Surgeon Stokes, amply demonstrated in the case of the *Relief* the wisdom of vesting the command of such ships in the medical officer, with an expert navigator as his assistant, instead of subordinating the medical officer to a lay commander.

THE INDIAN AMBULANCE GAZETTE.

The Indian branch of the St. John Ambulance Association, the excellence of whose work has received the cordial approval of Surgeon-General Lukis, the Director-General of the Indian Medical Service, has now its own official *Gazette*, the first number of which, dated January, 1911, now lies before us. It will be published quarterly, and it is hoped will be the means of facilitating the extension of the St. John Ambulance movement in India by serving as an instrument of communication between the various ambulance centres in that country. The first number, which is of quarto size and consists of 40 pages excellently printed, contains reports of meetings at various centres and much information of general interest with regard to ambulance work in other countries. We wish the venture every success.

BRITISH RED CROSS NOTES.

Lord Cheylesmore presided on Jan. 20th at a meeting held at the Middlesex Guildhall for the purpose of starting a voluntary aid ambulance scheme in connexion with the Middlesex Territorial Force. A proposal to create 11 districts or sections in Middlesex, with centres at Uxbridge, Staines, Hornsey, Brentford, Finchley, Hampton, Harrow, Ealing, Edmonton, Willesden, and Enfield was adopted, and a general committee of the Middlesex County Section, Territorial Branch, St. John Ambulance Association, was formed.

The first annual meeting of the Essex branch of the British Red Cross Society was held in London at the Liverpool-street Hotel on Jan. 18th, when the Countess of Warwick presided. It was reported that 23 detachments had been formed in the county—namely, 15 for women and 8 for men.

A branch of the British Red Cross Society has been formed at Bristol and 253 members and associates have been enrolled.

PERSONAL STAFF OF HIS EXCELLENCY THE VICEROY AND GOVERNOR GENERAL.

Major F. O'Kinealy, I.M.S., has been appointed Surgeon (dated Nov. 23rd, 1910).

THE ROYAL VICTORIAN ORDER.

Captain E. S. Worthington, R.A.M.C., who accompanied H.R.H. the Duke of Connaught, K.P., in his recent tour to South Africa, has been appointed a Member of the Royal Victorian Order (Fourth Class).

A STAFF TOUR FOR MEDICAL SERVICES.

Lieutenant-General Sir Horace Smith-Dorrien, K.C.B., D.S.O., has issued instructions for the collective training to be carried out by the troops of the Aldershot Command during the coming training season. A staff tour for medical services is to be held in March, and divisional and brigade staff tours between the beginning of April and the middle of June.

Correspondence.

"Audi alteram partem."

CONTINUOUS INHALATION IN PULMONARY TUBERCULOSIS.

To the Editor of THE LANCET.

SIR,—Dr. Burney Yeo's paper in your issue of Jan. 7th inst., ought to have made an impression on all those who are on the look-out for practical methods of affording relief or effecting cures without criticising too closely the *rationale* of the means employed. It may be doubted whether a few drops of creasote under the nose give off sufficient antiseptic vapour to reach the bacilli carrying on their activity in the depths of the pulmonary tissue, and the too-rigid scientist may feel inclined to discard this simple and efficacious method of treatment. His half-hearted recommendation may therefore fail to overcome the fastidious patient's objections to the "nasty stuff." This would be most regrettable, as the method, whether it be the main factor or merely an adjuvant, has proved itself of the greatest value.

In many of the cases of tuberculosis under my sole care or referred to me by my colleagues I have for some time been prescribing it, and I must admit that at first I was actuated by the "ut aliquid fiat" principle. I found, however, that one patient after another obtained relief dating from the time of the continuous inhalation. To many of us the smell of creasote is unpleasant and to the other inhabitants of the dwelling it is often almost unbearable. I have therefore been endeavouring to find a combination which will be as little unpleasant and as much efficacious as possible. The following (dubbed "gutt. cinnam. co.") will be found to combine these qualifications to a considerable extent:—

℞ Creasoti, ʒii.
Ol. Pin. Sylvest., Spirit. Chloroformi, āā ʒiss.
Menthol, gr. x.
Ol. Cinnam., m.v.

The sponge in the respirator (Dr. Burney Yeo's) is kept moist with this mixture.

To most people this is by no means unpleasant, but a few have an intense dislike to the smell and flavour of cinnamon, and in their case oil of citronella may be substituted. The most conspicuous result is the extraordinary diminution of the cough, and apart from any antiseptic or bactericidal effect I consider this a very important factor in the production of the subjective as well as of the objective improvement observable in the larynx. There is probably nothing more disturbing and injurious to the larynx than frequent or continuous coughing, and nothing more certain to induce repeated "auto-inoculation" than the muscular strain which it involves. The "rest" induced by this simple remedy is therefore beyond all price, whatever its *modus operandi*, and I am sure that those who introduce it whole-heartedly into their practice will receive the thanks of many sufferers. It has none of the objections attaching to those remedies which paralyse the coughing-centre as it only checks the useless and not the useful coughs.

Several of my colleagues prescribe the continuous antiseptic inhalation with great frequency and apparently find it beneficial in tuberculosis of the lungs. I can answer for it,

however, in relation to the larynx and recommend it with the utmost confidence.

I am, Sir, yours faithfully,

Cavendish-square, W., Jan. 21st, 1911. DUNDAS GRANT.

To the Editor of THE LANCET.

SIR,—The medical profession is greatly indebted to Dr. Burney Yeo and other early pioneers like the late Dr. Sinclair Coghill of Ventnor for their persistent advocacy of continuous inhalation in pulmonary tuberculosis. It was about 20 years ago, while a student at King's College Hospital, when Dr. Yeo was a physician there, that my attention was called in one of his clinical lectures to his antiseptic vapour treatment in pulmonary consumption. Soon after being qualified I put into practice the inhalation treatment when called upon to treat some bad cases of consumption. Ever since I have been an enthusiastic advocate of this method of treatment in pulmonary tuberculosis. When I began the open-air treatment about 12 years ago the sanatorium presented many opportunities of carrying out the inhalation treatment more systematically and persistently. I made very many trials on the volatility of antiseptic drugs and on the efficiency of inhalers. I found that the success of introducing the inhalant into the small bronchial tubes and air-passages was proportionate to the degree of diffusibility of the antiseptic mixture used. I found also that an inhalant consisting of formaldehyde, menthol, pumiline pine, and chloroform with rectified spirit gave the most satisfactory results. Hence I use most commonly the following formula:—

℞ Formalin (40 per cent.), mxxx. (2½ per cent. strength).
Chloroform, 3i.
Menthol, gr. xv.
Ol. Pin. Pumil., mxv.
Spt. Vin. Rect. ad ℥i.
Ten drops to be sprinkled every half hour.

N.B.—The formalin solution is made by conveying the formaldehyde into the rectified spirit solution, thus making the preparation more volatile.

After one or two weeks when formalin is more tolerated it can be increased to 5 per cent. Also creasote to the extent of 3 to 5 per cent. may be added to this mixture if desired.

As for an inhaler, I have devised one after the model of Dr. Yeo and Dr. Ruata of Perugia. My formaldehyde inhaler is made somewhat larger than Dr. Yeo's (and a little smaller than Dr. Ruata's), to take in more fully the nose and mouth, is more substantially made so as to bear the wear and tear of continuous use for many hours a day, is nickel-plated within and without to give smoothness and durability, and is curved to fit the chin. The inhaler is manufactured by Messrs. Oppenheimers, London.

In our sanatorium the beneficial effect of the inhalation treatment has been so marked and so uniform that during the last few years it has formed a part of the daily routine of the patients. In fact, my experience is that continuous inhalation, when combined with fresh-air treatment and manual exercise, gives better results than any other method of treatment that has been advocated so far by the medical profession. Consumptive patients are apt to get tired of carrying out the treatment at home after awhile unless they are very enthusiastic. The secret of success depends upon the persistent use of the inhaler for many hours a day with deep breathing, combined with open-air living and daily manual exercise. I warmly endorse Dr. Yeo's experience of inhalation treatment and would strongly advocate its administration both in an open-air sanatorium and outside.

I am, Sir, yours faithfully,

C. MUTHU.

Mendip Hills Sanatorium, Wells, Jan. 9th, 1911.

TUBERCULOSIS AND STATE INTERVENTION.

To the Editor of THE LANCET.

SIR,—In your issue of Jan. 21st, the joint honorary secretaries of the Conference on Tuberculosis, recently held at Edinburgh, charge us with making ambiguous and misleading references, in the preface of the second edition of the "Conquest of Consumption," to what took place at the Conference. They give the actual terms of the resolution to which we referred. It was as follows:—

That the special attention of the Chancellor of the Exchequer, Government, and Parliament be called to the great importance of giving the prevention and treatment of tuberculosis a prominent place in the proposed scheme of invalid insurance.

A conference of experts considers the question of the working man in relation to tuberculosis. It decides to ask the Government to consider the *great importance* of dealing in a *prominent* manner with not only the prevention but the treatment of tuberculosis in a State insurance scheme. When we draw the deduction that the Conference could not have decided to take such a step without meaning that some form of State intervention in regard to tuberculosis is necessary, we are accused of saying what is not the fact. For some reason the joint honorary secretaries contented themselves in their letter with a portion of a sentence from our preface. What we wrote was as follows:—

The representative Conference held in Edinburgh, in connection with the annual meeting of the National Association for the Prevention of Consumption, in July, 1910, although divided as to the form which State intervention should take, was practically unanimous in the opinion that some form of such intervention was necessary, and the proposition was supported by leading administrative officers in some of the largest cities in the Kingdom.

Is this comment either ambiguous or misleading? If so, then the Special Sanitary Commissioner of THE LANCET was also in error in his account (July 9th, 1910, p. 120) of the debate on this question at the Conference. He wrote:—

The Conference was unanimous as to the issue, the only difference being whether the desired legislation should be part of a general scheme or a law dealing only with tuberculosis.

We are, Sir, yours faithfully,

ARTHUR LATHAM.

Portland-place, W., Jan. 24th, 1911. CHAS. H. GARLAND.

RESEARCH DEFENCE SOCIETY.

To the Editor of THE LANCET.

SIR,—As it is just three years since the Research Defence Society was formed (Jan. 27th, 1908), we hope that you will kindly find room for a short account of its work during the past year. The number of members, which was about 2800 a year ago, is now 3770; and the number of associates, which was 130, is now 230. Six new branch societies have been formed, making 19 in all. Since January last the following have consented to be Vice-Presidents of the society: The Bishop of St. Asaph, Miss Balfour, Sir George Beatson, Dr. M. G. Biggs, Sir John Carrington, Lord Hugh Cecil, the Bishop of Chichester, the Earl of Durham, the Bishop of Ely, Sir David Gill, Sir Archibald Hepburn, Lord Kenyon, Professor Leith, the Duke of Norfolk, the Bishop of Nyasaland, Mrs. Henry Sidgwick, the Bishop of Stepney, and Archdeacon Watkins.

Since January last the following pamphlets and leaflets have been published by the society:—(1) "Pasteur, Science, and Medicine"; (2) "The Nation and the Tropics"; (3) "Plague in India, Past and Present"; (4) "The Helpfulness of Physiological Experiments to the General Practitioner"; (5) "Report of Annual General Meeting"; (6) "Diphtheria and Antitoxin"; (7) "Inoculations"; (8) "Experiments during 1909"; (9) "Charges of Cruelty against the Rockefeller Institute"; (10) "Fighting the Invisible"; (11) What the Doctor Says"; (12) "The National Welfare"; (13) "The Brown Dog"; (14) "A Question of Religion"; (15) "The Research Defence Society"; (16) "Sleeping Sickness": (17) "Malta Fever"; (18) "Experiments on Dogs"; (19) "In Memoriam, Louis Pasteur"; (20) "Humanity and Science"; (21) "Friends of Animals."

There has been a very great increase, during the past year, in the quantity of pamphlets and leaflets distributed, and in the number of addresses and popular lectures and lantern lectures given by members of the society in all parts of the country. Many debates also have been attended, in London or elsewhere, by the society's representatives with excellent results. We are constantly finding that the great majority of the audience on these occasions, after hearing both sides, is strongly in favour of the views of our society. A large quantity of our publications has been distributed among public libraries and similar institutes; a large quantity also is sold in the ordinary way of publication. During the past few months the society has been represented by stalls held at the following exhibitions: the Church Congress, the annual meeting of the British Medical Association, the Kennel Club Show, and the Birmingham Dog Show.

The Research Defence Society has nothing to do with the actual making of experiments on animals, nor with the administration of the Act; nor does it desire to see the

abolition of restrictions on experiments on animals in this country. It keeps itself to the work for which it was formed three years ago—that is, to make generally known the facts as to experiments on animals in this country and the regulations under which they are conducted; the immense importance of such experiments to the welfare of mankind; and the great saving of human and animal life and health which is already due to them.

We hope that many of your readers will become members or associates of the society, and will help to extend its educational work.—We remain, Sir, yours faithfully,

CROMER,
President.
SYDNEY HOLLAND,
Chairman of Committee.
F. M. SANDWITH,
Honorary Treasurer.
STEPHEN PAGET,
Honorary Secretary.

21, Ladbroke-square, London, W., Jan. 25th, 1911.

REBATES ON PETROL TAX FOR MEDICAL MEN.

To the Editor of THE LANCET.

SIR,—Everyone who has had extended experience of recovering rebates on petrol duty will sympathise sincerely with the complaint of Dr. J. S. MacDonagh in your issue of Jan. 14th. The difficulty appears to be that his retailer could not produce the certificates which, had it been duty paid spirit he sold, he should have been in possession of, or could easily have procured. In all such cases the retailer himself is liable to refund the amount he has charged for duty, and he in turn will readily obtain the same from the original vendor. Very large stocks of spirit were already in the country when the duty first became operative, and the difficulty experienced in sorting deliveries into duty-paid and unpaid was great. This state of affairs has now ceased to exist and the system is worked by the Excise officers most admirably. Indeed, of late it has been marvellous to see how speedily and satisfactorily claims under such a complicated and absurd tax are dealt with.

In view of the dates mentioned in Dr. R W. C. Pierce's letter, may I remind all your readers that claims *must* now be made before the expiry of six months from the date of purchase?—I am, Sir, yours faithfully,

J. EDWARD DAVIES,
Honorary secretary, the Motor Cab Owner-Drivers Association.

Willow-walk, Highgate-road, N.W., Jan. 18th, 1911.

THE NOMENCLATURE OF THE SUPRARENAL PRINCIPLE.

To the Editor of THE LANCET.

SIR,—As in the issue of THE LANCET for Jan. 7th, p. 73, you allude to the use of the word "adrenine" as a synonym for "adrenalin" and question its accuracy, as it occurs in a note in the "Year Book of Pharmacy," 1910, p. 177, dealing with an abstract appearing in THE LANCET of Oct. 2nd, 1909, of a paper by Mr. J. L. Jona, published in Australia, on "Adrenalin as an Emergency Treatment in Cases of Non-corrosive Poisoning," perhaps you will allow me to endeavour to justify its use on the following grounds.

In his original patent (1901, No. 1467) Jokichi Takamine expressly states that "this is an invention to procure the active principle of suprarenal glands ..... named adrenalin or *adrenin* (the italics are mine) in a pure condition." In view of the number of diverse trade names applied to what is, or should be, a definite chemical substance of an alkaloidal nature, the committee of publication of the "British Pharmaceutical Codex" have adopted Takamine's alternative synonym, with the addition of "e" to denote its basic nature, and have used the word "adrenine" in this sense. As tending to lessen confusion and to increase accuracy I have in the "Year Book of Pharmacy" adhered to this nomenclature. The necessity for the adoption of this common denominator is well illustrated in the case of two abstracts appearing in the current issue of the *Journal de Pharmacie et de Chimie*, 1911, vol. iii., pp. 78, 79. Here the word "suprarenine" is used in the first article by O. Gros, and "adrenaline" in the second by A. Lawen, although the latter paper is complementary to the former, and both authors evidently allude to the same substance. If these papers are abstracted in the "Year Book of Pharmacy" it will certainly be under the title "adrenine."

The inference in your note that the word "adrenalin" is a proprietary word is hardly tenable. It is stated by T. Maben, in a paper on "Adrenalin, the Active Principle of Suprarenal Gland" (*Pharmaceutical Journal*, 1907, vol. lxxviii., pp. 388–390) that "adrenalin is not a registered trade-mark nor a fancy name. It is a truly descriptive word, meaning the active principle of the adrenal structure ..... while the manufacturers ..... claim no proprietary rights over the name." Therefore, the injustice done to a "preparation" by the use of one or other of Takamine's synonyms is not very apparent. The injustice, if any, arises entirely from the loose manner in which trade names and proprietary euphemisms are applied to these newer remedies. This has caused them as a class to fall into disrepute, and has reflected hardly on the few more valuable therapeutic articles among them.

The "belief" expressed in your note that the word adrenine has been submitted to, and rejected by, the General Medical Council is groundless. That body has never considered the question. But had it done so that would have proved very little. It is evident, therefore, that most of the grounds on which your note appears to be based can hardly be considered accurate.

Moreover, it is no function of the "Year Book of Pharmacy" in its abstracts to advertise either "preparations" or persons. These abstracts are intended solely to record scientific facts or practical details of use to pharmacists in their calling, or to those who are interested in the subjects with which they deal.

I am, Sir, yours faithfully,

J. O. BRAITHWAITE,
Editor of the "Year Book of Pharmacy."

Chingford, Jan. 18th, 1911.

INOPERABLE CANCER.

To the Editor of THE LANCET.

SIR,—I was much interested to see from a letter in THE LANCET of Jan. 14th from Dr. Alexander Haig, asking that inoperable cases of cancer might be sent to him, that he has met with the same difficulty as others in obtaining such cases for the purpose of testing a theory or new form of treatment. As I have been on the outlook for such cases for a number of years I can heartily sympathise with Dr. Haig, and at the same time can, I think, point out how the difficulty arises. It is in this way—we have been brought up to believe that a case of cancer beyond the operative stage must of necessity die, with the very rarest exceptions, and where such a case is met with the doctor naturally says incurable, and that is practically the end of it. One has this feeling one's self, for when a case is, or at least appears to be, cured, one begins to have doubts of the diagnosis and to wonder if, after all, the patient ever had malignant disease.

Another reason is that it has become the fashion to say that we must know the cause before we can expect to find a cure, though this is against all medical history. We require to persuade medical men to send at least their poor inoperable cases to anyone who is working on new and what he believes to be hopeful lines, and not stick to the old groove of "try nothing."

I am, Sir, yours faithfully,

Upper Berkeley-street, W., Jan. 19th, 1911. SKENE KEITH.

THE INFLUENCE OF TOBACCO ON DIGESTION.

To the Editor of THE LANCET.

SIR,—THE LANCET in an annotation in its issue of Dec. 31st, 1910, gave its readers interesting information anent the dangers of tobacco smoking to sufferers from hyperacidosis; and I agree with much that you stated. I think, however, that there are one or two other contributory causes of this syndrome than those mentioned, which, with your permission, I shall here point out. My experience as a pipe-smoker, which extends over half a century, during much of which time I have also had occasional attacks of hyperacidosis, confirms my belief that these contributory causes

are mainly three: first, constipation; secondly, nervous excitement, such as may be caused by reading after a full meal an interesting novel, or maybe a somewhat controversial article in THE LANCET; and thirdly, as a result and meanwhile, the rapid suction of the pipe's mouth-piece. This quick puffing of the smouldering pipe is in my opinion the real cause of the trouble. It is well known that any action which promotes the flow of saliva will probably stimulate the peptic glands also. In my own case the rapid suction of an empty pipe, if other symptoms are favourable, will bring about these untoward results as readily as will one too tightly packed with alien tobacco from a friend's pouch (I am partly Scot by descent). Briefly, I may sum up my experience of this slow (very slow) poison in the following doggerel:—

Learn to smoke slowly. No pipes that draw
Will injure your over-acid maw;
'Tis violent suction starts the bane
Bequeathed to smokers as gastric pain!

I am, Sir, yours faithfully,

Hove, Jan. 14th, 1911. W. A. H.

THE HOUSING PROBLEM IN SOUTH WALES.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

(*Continued from p. 194.*)

A Bad Slum on a Choice Site.

OF the various slums for which Merthyr Tydfil has acquired an unenviable reputation perhaps Company-row is the most notorious. This may be due to the fact that it was specially denounced in Dr. J. Spencer Low's report to the Local Government Board or because it is on the main road between Merthyr and Dowlais and is easily found. The sanitary authorities, however, seemed inclined to challenge the claim made that Company-row was the worst place, so that its inhabitants are even denied the melancholy privilege of being the most to be pitied. In fairness I must say that on visiting the place it soon became evident that the tenants remaining in Company-row were enjoying a far more liberal share of open space and invigorating mountain air than generally befall the lot of the submerged in large industrial communities. Facing this row of one-storey cottages is a wide open space that only needs to be paved and kept tidy. The soil has been converted into black mud consisting of a mixture of soot and coal dust—not unhealthy substances in themselves as part of the soil, but they help to make the people and surroundings look dirty and grimy. A few flagstones were placed in front of the cottages and here also were gullies leading to drains for the slop water. These slop drains in front of the cottages were ventilated, and so were the closet drains, which are all at the back of the cottages. When I entered one of the cottages it seemed very miserable. There was no wooden or even tile flooring, but flagstones such as are used for a street causeway. This must be very cold in winter. Fortunately, coals are cheap, and in all the houses, however poor, I noticed there was a bright, glowing fire. These cottages are dirty, overcrowded, and miserable; but with a glorious look-out at the back. There were no houses blocking out light and air. A deep descent to a mountain torrent rendered building operations difficult. Thus a wide space is kept open, and the waters, as they rush along below, help to stir and cool the air, so that for hot, sultry, summer days this spot might be made the site of pleasant residences. It is true that the steep hill on the other side of the torrent could be sneeringly described as a sham mountain, for it was not made by nature, but is one of the numerous "tip" hills that arise as the result of tipping the refuse from the mines and foundries. There is, however, nothing unwholesome about these modern and manufactured mountains, though it must be confessed that the grass which strives to grow upon them looks very yellow and unhealthy.

German Slum Children: a Contrast.

With this splendid expanse of valley, hills, and uninhabited country at the back, and a wide open space in front, with both slop and soil drains situated outside the cottage walls, and no soil pipes under the cottages, it has rarely been my lot to visit slum property so fortunately situated. When I recalled the sight of the children in, for instance, the cholera districts of Hamburg, living in courts so narrow that it is possible to shake hands with the person looking out of the window opposite, and where the houses were at least five storeys high, I could not but think that these Welsh children were to be envied their air-supply. But when I examined the children themselves and saw that evidently there was no housewife to look after them, that there was no one to wash them, or brush them, or mend their clothes, then it was the children of the cholera slums of Hamburg that were to be envied.[1] Indeed, what I said of the slum-dwellers in Hamburg is the one great lesson that has to be conveyed to the British poor, not only in South Wales, but in many other parts of the country. In visiting three years ago one of the worst cholera slums of Hamburg which were still intact I said, speaking of its poor inhabitants:—

> On them at least the lessons of the great cholera epidemic have not been lost. They have learnt that cleanliness and plenty of air were the best of preventives. My photographs testify by the numbers of windows that are open how these poor people are striving to make the most of what little air is able to penetrate the narrow courts in which they are compelled to dwell. As for the cleanliness, the best evidence was the appearance of the children. Some looked poor and pinched and anæmic, but out of some hundred or more children whom we saw and carefully observed in these courts not one was untidy or dirty. Their clothes might be made of poor materials, they might be patched or darned, but not in one instance were they torn or disorderly. As for the little girls it was simply beautiful to note how carefully their hair had been combed, brushed, and dressed, and clustered round their clean and well-washed faces. Yet these were the slum children of Hamburg, bred and born in those very slums, unaltered and even still more overcrowded, where the inhabitants had been decimated by the terrible cholera epidemic of 1892. M. Rey, like myself, was deeply impressed, and he kept saying, "See, see, what a brave fight they are making for existence even here, where everything is against them." If in spite of the continued existence of such slums and of the neglect of the interest of the poor, the death-rate of Hamburg is falling and there has not been another great epidemic, the honour is due to the Hamburg housewife. By keeping her children clean she has proved herself the most practical of all the sanitary reformers.

At Merthyr the verdict must be the exact opposite. If the death-rate is falling, this is due to administrative measures rather than to any special care or concern displayed by the poorer class of housewives. Instead of making a brave fight for existence the poor here fall into a state of general apathy; they no longer care how dirty and ill-kept their homes become. Cottages that might be quite pleasant habitations become dilapidated, dirty, and overcrowded. The inhabitants rarely wash and never mend their clothes. They have no pride, the women are slatterns, there seems no discipline at home, and the pressure exercised by the medical examination of the children at school is not yet sufficient to keep them clean and tidy. It would appear as if no one cared, neither the parents, the children, nor the community at large. No one seems ashamed. Amidst picturesque scenery and hills, where there is the purest mountain air and all that is required to make life beautiful and exceptionally healthy, a hideous town has been built and a large mixed population allowed to gather together without any thought of the degradation likely to ensue, for at first there were no regulations, no restraints, and no educational influences of a practical nature. While the main streets were built without any plan leading to architectural developments and harmonious combinations, the slum dwellings erected immediately behind them were constructed in defiance of laws of health or decency. Thus a beautiful country has been rendered hideous and unhealthy. The very hills that should contribute most effectively to the beauty of the district and to the health of its inhabitants have been disfigured by squalid people, living in ugly and unwholesome dwellings. Everyone knows that by building on the hillsides rows of houses one above the other the direct rays of the sun can reach and purify each house. In the same way the passing winds help to destroy and carry off all impurities. The difficulty of building healthy houses in the great centres of population is due to the impossibility of securing sufficient open space around them. But here, on these Welsh mountains, the houses can be built one above the other, and thus cannot cast each other in the shade. Will it be believed that, instead of profiting to the full from this inestimable advantage and securing for every house all the air possible, both back and front, holes have been dug into the mountain side and semi-cave dwellings artificially created?

The "Over and Under" Houses.

These "over and under" houses constitute the special grievance of South Wales. Company-row is an example of

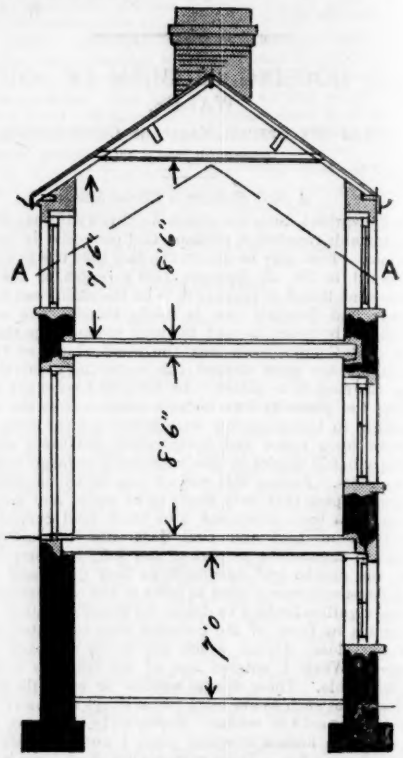
[1] See THE LANCET, Dec. 14th, 1907, p. 1728.

this abomination. The house that is "over" is fortunate, because it rests on another house, and therefore on a dry foundation, and it has open space both back and front. But the "under" house has no back space at all. The back is close upon the mountain side. The wall of the back room is built up against the bare earth, and, of course, the damp comes through. In some cases these "under" houses are of two storeys. Here and there an attempt has been made to separate the backs from the mountain side by cutting a trench down and making a sort of area a few feet wide and two storeys deep. This certainly does mitigate the dampness, but it provides very little air and no light whatsoever. Just below and at the back of Company-row is an old road on which the "under" dwellings give. It is an historical road, for here it was that Trevethick, the precursor of Stephenson, drove his traction engine. This primitive locomotive was provided with a brick-built chimney or funnel. Trevethick had a wager that he would draw a load of ore along at the rate of eight miles an hour. This he did easily, but the shaking was too much for the chimney and it fell clattering on the road which passes under the cottages of Company-row. The spot should be the pride of the town, and here some of the worst slums have been allowed to come into existence. But these are the sins of days gone by. Nothing of the sort could be done now. There are severe by-laws governing the construction of new dwellings. The difficulty is to efface the ugly traces left of the ignorance and indifference of past generations. This work of obliteration and reconstruction never seems to proceed fast enough. In any case, Company-row has been dealt with in a most summary and radical fashion. All the "under" houses are closed. Strong planks are nailed over the doors and windows. There is no admission possible, not a soul is living in them. Indeed, it is only necessary to look down the long list annually published of houses condemned to see that it is these "over and under" dwellings which are the most energetically attacked. Yet there are still some remaining if only to bear witness to the abominations that prevailed in the past. This is notably the case at Merthyr Vale where some of the under houses are two storeys high. Viewed from below, these houses appear four storeys high. But while the two lower floors are fronts of houses, the two upper floors are backs of houses which have their frontages and entrances on a street behind and on a higher level. In many cases where such dwellings have not been altogether abolished, the lower portions have been condemned, at least as sleeping apartments, a staircase to the upper portion built, and the two separate houses thus connected. The accompanying drawing of a section illustrates such a transformation. The A line indicates where the roof used to be; but now the walls have been raised and new and better roofs put on, so that, instead of sleeping in a low garret, the inhabitants have a fairly lofty bedroom with a ceiling and thorough ventilation. The thick, black vertical line to the left shows the level of the earth on the higher road. To the right at the lower level is the lower road, where are one-roomed tenements only seven feet high built with their backs to the earth of the mountain side. These as separate tenements and dwellings have been abolished altogether and converted into sculleries, washhouses, cellars, or lumber rooms for the house above.

A By-law Enforcing Cleanliness.

There were also a large number of back-to-back houses, and these have been dealt with in many cases by cutting through the partition walls and throwing two houses into one. By thus making two houses into one not only can a through draught be established, but in several cases the number of inhabitants became sufficient to enable the authorities to register the dwelling as a house let in lodgings. It then comes under a very useful and stringent by-law enacted on Oct. 21st, 1907. This must not be confused with the old Common Lodging Houses Act of 1851. The new by-law applies to private lodgings in private houses where the rent is under 5*s.* a week for unfurnished and under 7*s.* 6*d.* a week for furnished lodgings. Then it stipulates that each adult shall have 400 cubic feet of space and each child under 12 years 200 cubic feet. The sexes are to be separated. The sanitary inspectors have the right of entry both day and night. There must be one closet for every 12 inhabitants. The whole of the premises must be kept thoroughly clean. All the floors must be swept every day and scrubbed every week. All slops and refuse must be removed from within the house every day. All the windows must be fully opened for at least one hour every morning and every afternoon. Immediate notice of any illness has to be given to the authorities. It will be admitted that to bring some of the worst property and the most careless and dirty of the inhabitants of Merthyr under such a law as this is no slight achievement.

In spite of all these efforts much remains to be done, and there are yet many deplorable places to be seen. Some are closed up like Crystal Palace-court and other and smaller courts, all neighbours of Company-row. Others are condemned but not yet vacated. Some of these houses have been allowed to fall into a very dilapidated condition. Of 300 to 350 little cottage houses at Old Dowlais, about 135 are inhabited by two or more families, and yet these houses have rarely more than four rooms. There



An "under and over" house transformed. The thick black line is the portion of the wall touching the mountain side against which the "under" house is built. This is a one room tenement giving on to a road to the right. The "over" house gives on a road to the left and at a higher level. The line A A indicates the roof of the former garret bedroom.

is here one celebrated slum named, perhaps out of a spirit of derision, Garden-row. It consists of a row of little yellow-coloured cottages with no backs, and in front the upper windows are about 23 by 19 inches. In many cases there is no ceiling upstairs. The beds are under the bare rickety tile roof. The rafters are rotten, the rain passes through easily, and the whole structure threatens to fall in. The chimney stacks are also a menace; they have completely lost their original shape as so many bricks have been detached and blown off. One of the upper rooms which I visited measured 3 feet 6 inches in height by the eaves and 7 feet at the apex. Naturally, there was no ceiling. The windows for the bed-rooms thus situated were 18 inches square, including the framework; the actual opening for the passage of air was only 16 by 14 inches. There is also in this district a terrible little

court off Wild-street which abuts against a high building that very effectually helps to keep out the air. Here are old back-to-back houses where doors have been cut through the partition walls, but as the doors are generally, and carefully, closed the houses become in effect back-to-back houses once more. Some of these, though back-to-back houses, have in front of them only very narrow and dark courts. Naturally, this greatly accentuates the evil. Finally, such doors and windows as exist are very small. In Garden-row, in Tissington-court, and other thoroughfares and courts of this neighbourhood several houses have been closed altogether, but many more remain which do not deserve better treatment.

(To be continued.)

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Health of the City.

IN the quarterly report to the health committee the medical officer of health, Dr. J. Robertson, gives a brief summary of the statistics for last year. The figures are subject to revision, but accepting them as approximately accurate I find that the death-rate for 1910 was the lowest on record, 13·7, as compared with 15·5 in 1909. The zymotic rate is also the lowest recorded, 1·1, 1907 coming next with 1·8. The infant mortality, 130 per 1000 births, was again a satisfactory record and an improvement upon 1909 with 135. Phthisis is steadily upon the decline, the death-rate from this disease being 1·15 last year. The cases of typhoid fever notified were also fewer than ever before—73. The birth-rate last year was 26·2, smaller than in any previous year.

Midland Counties Home for Incurables.

The annual report of the committee of the above home stated that the receipts for 1910 were £7513, compared with £7668 in 1909. Subscriptions were £46 less, donations £108 less, and patients' payments had fallen from £3019 to £2949. This last decrease was due to the fact that the committee had felt able during the year to create four additional free beds, and to reduce the charges for the partially paying patients when temporarily absent from the home. Every additional privilege of this nature made a fresh demand upon the income derived from endowments, subscriptions, and donations, and it was therefore regrettable that these should have diminished. To help in obtaining fresh sources of income, the committee was trying to obtain the services of honorary local correspondents in the various districts served by the home. During the year £3000 had been added to the invested funds.

Gas Lighting in Relation to Public Health and Smoke Abatement.

At a meeting of the Midland Association of Local Government Officers, Mr. R. J. Rogers, lighting superintendent of the Birmingham Gas Department, read a paper on the Use of Gas in Relation to Public Health, with special reference to Smoke Abatement. Mr. Rogers said that with regard to the ventilation of a room, not only was the use of gas economical, but it was hygienically superior to any other system of artificial illumination. The advocates of electric light contended that electric light was superior to gas because it did not consume or vitiate the air, that it created no heat, and did not damage decorations. He quoted opinions of authorities in support of his argument that the use of gas-lighting of high candle-power had been proved to be conducive to a healthy atmosphere and to the well-being of the public who frequented the rooms in which it was used. Theatres and music-halls were generally provided with a large central sun-burner fitted with flat-flame gas-burners. The primary use of this sun-burner was for ventilation, but with the more general use of electric lighting in theatres these sun-burners had been more or less neglected, and were not sufficiently used considering their very efficient action in drawing the vitiated air out of the theatre. With regard to smoke abatement, Mr. Rogers said much had been achieved, but it was necessary for the interest of the citizens generally to be aroused. The Birmingham town-hall and council house showed unmistakeable signs of the disintegration caused by smoke. The gas-engine had done much to lessen the amount of factory smoke. London, Glasgow, Sheffield, Leeds, Manchester, and other industrial centres had their own smoke abatement societies, but in Birmingham there was no such society, and he urged the formation of one.

Jan. 24th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Liverpool School of Tropical Medicine: Expedition against Sleeping Sickness.

ON Jan. 19th at the Adelphi Hotel, Mr. W. H. Lever (the chairman of the school) entertained at dinner a large gathering of gentlemen interested in the work of the School of Tropical Medicine, or connected by business ties with those tropical regions in which the good results of that work have already been seen, in order to bid *bon voyage* to Professor J. L. Todd, Dr. Wolbach, and Mr. Ernest D. Todd, who proceeded to Gambia and Senegal on Jan. 21st to investigate sleeping sickness. The chairman was supported by Professor Todd, Dr. Wolbach, Mr. Ernest Todd, Sir Owen Phillips, K.C.M.G. (Vice-President of the school), Sir William Bowring, Bart., Sir Edward Russell, Sir Alfred Haslam, Professor Sir Rubert W. Boyce (dean of the school), Professor Ronald Ross, C.B., Professor H. E. Annett, and others. The loyal toasts having been duly honoured, the chairman proposed "Our Founder of Revered Memory," and asked the company to turn down their glasses in remembrance of Sir Alfred Jones. The toast was acknowledged in solemn silence. The chairman then submitted the toast of "The Twenty-seventh Expedition of the Liverpool School of Tropical Medicine," and said that they had every reason to feel proud of what the Liverpool School had done in regard to tropical disease. The present King of the Belgians took a great interest in the movement and recognised its paramount importance. The school was greatly encouraged and stimulated by the progress it had made, despite the fact that the Government had rather turned its back on them. It would interest them to know that the Liverpool School had raised nearly £100,000 for the investigation of tropical disease. But the Government had been lax in dealing with those diseases. It was necessary that something should be done if we were to retain our tropical possessions. Many of these at present were the happy hunting ground of the mosquito and other pests of tropical life. They advocated such measures being taken as would not only prevent epidemics breaking out, but make the tropics the healthiest part of the world. Well, he believed that they were gradually doing it. The methods by which the Government approached this subject did not commend itself to any who gave scientific attention to this matter. The Liverpool School was advocating measures to prevent disease and to make the tropics habitable for the white man. It was a greater thing for the governor of a tropical state to look after the cleanliness of the town in which he was stationed than to lead a punitive expedition to butcher niggers in the bush. Professor Todd, in reply, said that the study of tropical medicine was not only important to Great Britain but to the world. They should endeavour through the press to stimulate public opinion and keep alive interest in the great work that was being done. Dr. Wolbach also replied, and said that he desired to pay a tribute from Harvard University as to the work the school was doing in the way of tropical research. His university recognised that there was no better school than that of Liverpool. The aim of the present expedition was either to verify or disprove the at present accepted theory with regard to sleeping sickness. Sir Edward Russell proposed the toast of "Commerce and Medical Science," which was replied to by Sir Owen Phillips, Sir Rubert Boyce, and Professor Ronald Ross.

The Medical Society of Liverpool.

At the annual meeting of the Liverpool Medical Institution held on Jan. 19th Dr. T. R. Bradshaw, the President, moved on behalf of the council, the following resolution:—

That the name "The Liverpool Medical Institution" be changed to "The Medical Society of Liverpool."

The necessary two-thirds majority of those present and voting having been secured, the motion was carried. Professor C. S. Sherrington, F.R.S., was elected a vice-president of the society.

New Accident Hospital at Garston.

The finance committee of the city council has had under consideration the advisability of giving financial aid towards the erection of a hospital at Garston, the most southern district of the municipality. A special subcommittee has made a report to the effect that an offer be made, without admitting liability, to the committee of the proposed accident and emergency hospital at Garston and district to contribute £5000 towards the erection of this hospital. The original proposal of the finance committee was to grant a sum of £4000, but by the casting vote of the chairman the increased amount of £5000 was carried.

Jan. 24th.

WALES.

(FROM OUR OWN CORRESPONDENT.)

Cardiff Water-supply.

THE heavy rainfall of last year has increased the amount of water in the Cardiff reservoirs very considerably. The average rainfall for the past 26 years on the gathering grounds which serve the Brecknockshire reservoirs was 79 inches, and in 1910 it was 92 inches. The amount of water now in store in the corporation reservoirs is equal to about five months consumption, based upon an average per head daily of 27 gallons. In spite of this satisfactory condition and in view of the anticipated growth of the borough the corporation has begun the construction of the third and last reservoir in Brecknockshire. It is expected that the completion of the undertaking will not be attained until about six years hence, when there will be a total storage capacity of 2265 million gallons.

Scarcity of Houses in Swansea.

It was anticipated that the exhibition of workmen's dwellings, erected on land owned by the Swansea corporation, which was held last year, would have led to the erection by private enterprise of an increasing number of working-class dwellings. This anticipation has not been altogether realised, though the corporation has decided to add to the number of cottages it already possesses by erecting several hundred more. The scarcity of such dwellings is indicated by the statement of the corporation rent-collector that for one empty house he had received 98 applications and that 560 persons had applied for some of the new houses.

Swansea Hospital.

The board of management of the Swansea Hospital has decided to appoint a fourth out-patient medical officer and to create a new appointment of assistant ophthalmic surgeon. To the latter position Mr. H. E. Quick, a former house surgeon of the hospital, has been elected. A proposal has been made that the hospital management and the corporation should coöperate in the establishment of a pathological and bacteriological department, and that in association with it the vaccine-therapy department of the hospital should be carried on under the supervision of an honorary medical officer.

Jan. 24th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh School of Medicine for Women.

AT the Edinburgh School of Medicine for Women, in which the lecturers are recognised as giving qualifying courses for graduation in the University of Edinburgh, 74 students have been enrolled during the winter. Of these, 64 are working with a view to University graduation and 9 for the triple qualification.

Annual Report of Chalmers' Hospital, Edinburgh.

At the anniversary meeting of the Faculty of Advocates, held on Jan. 18th, the directors of the Chalmers' Hospital reported that the number of patients treated during the year was 602 in all—373 of those having been treated in the free wards and 229 in the private wards, paying board. Of the 602 cases, 345 were surgical and 257 medical. Operations numbered 330. The out-patients numbered 3214, of whom 2835 were surgical and 379 medical. Operations under general anæsthesia in the out-patient department numbered 188 and dressings 17,236. The ordinary income for the year amounted to £4073 7*s.* 9*d.* and the ordinary expenditure to £3564 7*s.* 9*d.*, leaving a surplus of £508 10*s.* 3*d.* This surplus, increased by the accumulated surpluses of previous years, amounts to £1473 5*s.* 3*d.* The directors are considering alterations and extensions to the accommodation of the hospital, but could not yet submit any definite scheme to the Faculty. A lady, who wished to remain anonymous, has offered to defray the cost of erecting a covered verandah outside the female private ward. The offer has been accepted, and the verandah, which cost £200, has proved a great boon to convalescent patients.

School for Cripple and Invalid Children in Edinburgh.

The Edinburgh school board has recently purchased three small villas in Duncan-street and South Gray-street which are to be used as schools for mentally deficient and cripple and invalid children. One of the houses has already been altered and is in use as a school for mentally deficient children, and warrant was granted this week by the Dean of Guild Court to make alterations in the other two. Accommodation for cripple children will be on the ground floor, and will consist of three class-rooms, each holding classes of 20, a large dining-room, and a new entrance hall. On the upper storey there will be class-room accommodation for invalid children and a large hall. On the south side of the building there will be large verandahs where classes will be taught in fine weather, and on to which the class-rooms will open by means of folding doors. Hot-water pipes will be used for supplementary heating, but the class-rooms will be provided with open fire-places.

Appointments in the University of Edinburgh.

Dr. A. H. F. Barbour has been reappointed Lecturer on Gynæcology, and Mr. J. W. Dowden has been appointed an Examiner in Surgery and Practical Surgery.

Epidemic of Diphtheria in Arbroath.

An epidemic of diphtheria has broken out in Arbroath and district. Since the middle of December 49 cases have been admitted to the hospital.

Medical Inspection of School Children in Aberdeen.

In connexion with the question of treating and cleaning verminous school children the public health committee of the Aberdeen town council has now presented its report. It will be remembered that the communications from the school board requesting the coöperation and assistance of the sanitary authority in this matter were remitted by the council to the public health committee. The committee is of opinion that the town council should coöperate with the board in any practicable measures suggested for the purpose. It recognises that the presence of body vermin in a family is nearly always associated with a lack of personal cleanliness, and indeed with cases that would justify active interference by the public health department. The committee is not sanguine that permanent results will follow from any system of dealing with the verminous condition until a higher standard of cleanliness is reached in the affected households, and it is therefore disposed to believe that the most valuable effect from any measures that might be taken would be the stimulation of a stronger sense of cleanliness. It believes that, except in the case of parents who are altogether lost to a sense of shame in having their children sent home from school as filthy and verminous, the work of the medical inspectors of the board will probably in course of time appreciably raise the standard of family cleanliness, and thereby lead to a corresponding decrease in vermin. It is satisfied that the public health department has so far done all that can be done in present circumstances, and has indeed attempted more than in almost any other town regarding which it has information. Without venturing on an opinion as to what degree of permanent benefit may result from the application of radical measures in a large proportion of the cases of verminous households, the subcommittee recommends that as soon and as far as may be practicable a combined effort by the school board and the town council should be made to bring such measures into operation and to give them a fair trial. The annual cost of carrying out the proposal would amount to about £655, which would be borne by the town council and school board equally. If special premises have to be erected for dealing with verminous persons the total annual cost would be increased to not less

than £800. It would be desirable, in order to estimate the effective value of the whole work and to enable both the board and the council to ascertain whether they would be justified in undertaking it on the radical and somewhat expensive plan suggested, that all the children should be inspected for body vermin, say, every two or three months, and that, if desired, facilities should be given to the public health department for being represented at the inspections. The subcommittee has not in its estimate of expenses made any allowance for the cleaning of houses and the washing of clothing and bedding, and if such were undertaken the expenditure would be increased by £200 or £300 annually. With the view of carrying out the suggested arrangement an agreement between the council and the school board has been prepared.

Medical Inspection of Schools in Caithness and Sutherland.

A meeting of the Caithness Secondary Education Committee was held at Wick on Jan. 21st, when an important letter was submitted from the Education Department as to the appointing of a school medical inspector for Caithness. At present Dr. G. Dick of Wick is joint medical officer of Caithness and Sutherland, and the Department recommended that the two counties should be separated for public health purposes and an officer appointed to look after public health and school medical inspection in each county. After some discussion, it was agreed to offer the appointment of school medical inspector for Caithness to Dr. Dick, on condition that he gives up the medical officership of Sutherlandshire, the salary to be not less than his present emoluments. The county council subsequently fell in with the arrangement, and it was remitted to a committee with powers to approach Dr. Dick.

Complimentary Dinner to Sir David C. McVail.

Last week Sir David McVail was entertained at dinner by a large gathering of lay and professional friends in recognition of the honour of knighthood recently conferred upon him. Dr. D. N. Knox, President of the Royal Faculty of Physicians and Surgeons, Glasgow, occupied the chair and proposed the toast of the evening. After a tribute to his work as professor of physiology in Anderson's College, Dr. Knox said that their guest there joined Dr. Ebenezer Duncan, Dr. Reid, and himself in forming the Western Medical School in Glasgow. There he taught systematic medicine until he was transferred to the Royal Infirmary and became the professor of clinical medicine in St. Mungo's College. All this time Dr. McVail was thinking over the great question of medical reform, and the first intimation he gave on the subject was an introductory lecture he delivered in the Western Medical School on the teaching of medicine in Glasgow. It created considerable talk at the time, and immediately thereafter, in the early "eighties," the great question of medical reform came before the Scottish Universities. When the Bill of 1889 became a statute there was no doubt that it was to the skill, determination, and generalship of Dr. McVail that any benefit they had received from the Act was due. The affiliation clause was directly due to his efforts. The chairman also referred to their guest's services as a member of the University Court, and to the honour conferred on him 15 years ago by his appointment as Crown representative for Scotland on the General Medical Council. Sir David McVail, in acknowledging the toast, gave many interesting reminiscences of olden times in the Royal Infirmary, dealing more especially with the work of Lord Lister and Sir William Gairdner. At a later period of the evening Dr. John Patrick, on behalf of his old house physicians and students, presented Sir David McVail with a silver salver, candlestick, and flower vases, in recognition of their high regard and to mark the honour conferred upon him.

Scottish Poor-law Medical Officers' Association.

The report of the committee of this association for 1910 says that during the past year much correspondence has taken place with outgoing medical officers of over 25 parishes, all but two of whom courteously supplied on request detailed information regarding the appointments. The committee has obtained authoritative information, where necessary, and given advice in the matter of several problems submitted; for instance, appointments are absolutely at the discretion of the parish council, so that a non-resident appointment made thereby holds good even though there be a medical man resident in the parish. The Secretary for Scotland, Mr. J. Cathcart Wason, M.P., has replied to a query that he sees no chance of the Parochial Medical Officers (Scotland) Bill being considered in Parliament in view of the report of the Royal Commission on Poor-law, until the Government shall attempt legislation on the lines of the report. When that takes place Mr. Wason will have an opportunity to get the grievances of the Scottish Poor-law medical officers remedied. The secretary announces that he will always welcome communications from the members, which will, on request, be held as private and confidential, unless from the members of the committee. The annual meeting for 1911 takes place at the St. Enoch Station Hotel, Glasgow, this week, when the report will be submitted and new officers will be elected. Owing to deaths and resignations the numbers of the society are diminished, and new members are urgently asked for. The subscription is 5*s.* per annum. The financial report for 1910 shows assets £185 14*s.* 4*d.*, expenses £23 6*s.* 11*d.*, balance £162 7*s.* 5*d.* The present secretary is Mr. W. L. Muir, 1, Seton-terrace, Glasgow.

Jan. 24th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Insanitary Primary Schools.

ON many occasions in the past few years attention has been drawn to the insanitary conditions of the Irish primary schools and to the neglect of hygienic considerations shown in the conduct of the schools. The Dublin Sanitary Association has recently had the subject under investigation and has published an important report thereon. The report quotes from Mr. Strong, an inspector of schools, who, in speaking of the schools in his district, says: "There are many of these unsuitable houses in the city of Dublin—one in the crypt of a church—badly lighted, heated, and ventilated; and another in an old dwelling-house, whose former drawing-room is the school-room." It is, of course, the fact that the Board of National Education has no direct control over school administration, but it has the very important power of withholding the grant in aid unless the school is "conducted in accordance with the regulations of the Commissioners." It is therefore well within the power of the Board to refuse the grant unless the schools are conducted in accordance with the demands of hygiene, but it cannot be discovered that they have generally exercised pressure in such a direction. Moreover, since 1892 attendance at school has been compulsory in cities and corporate towns as well as in many rural and suburban districts, and therefore parents have no option but to send children to what are often insanitary dens. On this point the report of the Dublin Sanitary Association remarks: "It would seem that the Commissioners consider the attendance of the children as the essential thing; that, if convenient, this attendance should be in properly equipped schools; but if such schools are not provided, still the children must attend at any school, no matter how unsuitable it may be. We should rather interpret their duty to prohibit, as far as lies in their power, the attendance of children at any school which is not properly equipped." Not only, however, have parents to send children to unhealthy buildings, but they are bound, in case of the child's absence through illness, to produce a medical certificate of the cause. In cases of mild disorder, it is, of course, easier to send the child than to obtain the certificate, and in consequence children with various contagious diseases are found mixing with healthy children in the school-room and play-ground. There is no system of medical inspection of schools in Ireland, and the evils resulting from this indiscriminate mingling of the infective with the healthy consequently go unchecked.

Infant Mortality in Dublin.

A conference was held in the Mansion House, Dublin, last week to discuss the problem of infant mortality. The death-rate of infants under one year has been, on an average for the past five years, 146 per 1000, this being the highest rate in Ireland. The corporation has recently adopted the Early Notification of Births Act, and it is now proposed by the Women's National Health Association to organise a band of voluntary workers, who, under the control of the city health

department, are to visit the homes of the young mothers and offer advice as to the care of the babies. It is essential that these workers should be trained and efficient, and a committee of medical men, nurses, and others is already at work arranging a course of instruction. The movement has the support of the heads of the various maternity hospitals of the city.

Dr. Macnaughton-Jones's Museum.

With patriotic spirit Dr. Macnaughton-Jones has presented to the Royal College of Surgeons in Ireland his gynæcological museum. Though the collection is small—about 100 specimens—it is interesting, for Dr. Macnaughton-Jones preserved only objects of special pathological or surgical value. Moreover, the specimens are mounted so as readily to show these points of interest; they strengthen the museum of the College in a point where it was weak.

The Royal Sanitary Institute.

His Excellency the Earl of Aberdeen has consented to act as patron, and Lord Dunleath is to be the President, of the Twenty-sixth Congress of the Royal Sanitary Institute, which is to meet in Belfast, on the invitation of the city council, from July 24th to 29th.

The Belfast Hospital for Sick Children.

At the thirty-eighth annual meeting of the supporters of the Belfast Hospital for Sick Children (incorporated), held on Jan. 20th, the new president, Captain the Hon. Arthur O'Neill, M.P., occupying the chair, it was reported that during the past year 564 patients (261 medical and 303 surgical) had been treated in the wards, while in the out-patient department there had been 10,864 attendances. Financially, the expenditure for the year amounted to £1910 10*s.* 9*d.*, which was in excess of the income by £251. Dr. P. T. Crymble and Dr. W. McCready have been appointed members of the medical staff in place of Dr. B. O'Brien (resigned) and Dr. Joseph Nelson (deceased). The present class of students is larger than has been the case for several years.

Jan. 23rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Medical Treatment of Accidents to Workmen.

THE *juge de paix* of the eighteenth *arrondissement* of Paris has recently decided a point of law which has remained uncertain until now, the question at issue being the payment of certain medical fees by the employer of an individual who had been injured in the course of his work. The point has now been decided in favour of the medical attendant. Some insurance companies had argued that fees for dressings, massage, and similar details of treatment were not due to the medical attendant unless the latter had personally carried out these procedures. The medical men, on the other hand, put forward the plea that these parts of the treatment, although not applied by them personally, were nevertheless conducted in their hospitals, under their direct supervision and on their responsibility, by the agency of nurses and other persons in their service, and that they were entitled to remuneration for these duties. As above mentioned, a decision was given in favour of the medical men.

The Question of the Abortive Treatment of Syphilis.

At a meeting of the Société de Médecine de Paris held on Jan. 13th, after a discussion in which M. Cayla, M. Gaston, and M. Leredde took part, a resolution, proposed by M. Druelle, was carried unanimously to the effect that the society, while fully recognising the meritorious endeavours which had been made to discover an abortive treatment of syphilis, was of opinion that this object had not yet been accomplished. At a recent meeting of the Société de Pathologie Exotique M. Nicolle and M. Conseil described some cases of malaria treated by "No. 606." They said that it produced a well-marked good effect very rapidly, causing an almost immediate improvement in the general symptoms, a fall of temperature, and a diminution in the number of the hæmatozoa. On the other hand, this action was neither complete nor of long duration. The remedy was indicated as the first step in the treatment of serious cases and ought to be followed by injections of quinine. The doses of "No. 606" administered under these circumstances were from 30 to 40 centigrammes.

Seaside Bathing Resorts.

At a meeting of the Société de Médecine de Paris held on Jan. 13th M. Levassort emphasised the importance of situation and the direction of exposure in connexion with sea-bathing quarters, saying that Brittany was the part of France which offered the most ample choice of bathing-places, according as a stimulant or a sedative effect was desired. By analogy with the methods followed at inland balneary resorts, he showed the advantage of immersing the legs, and spoke of the benefit which children derived from playing on the sand, although they also spent a portion of the day in the water. M. Froussard mentioned that in some mineral-water stations, especially at Plombières, foot-baths, leg-baths, and local douching of the lower extremities were employed every day for the relief of sanguineous congestion of the intestines and uterine appendages.

Determination of the Freshness of Milk.

The following method of determining the freshness or otherwise of milk was described by M. Bertin-Sans and M. Gaujoux at a meeting of the Pediatric Society held on Jan. 17th. The sample of milk contained in a test-tube had first added to it some drops of a red solution consisting of 0·25 part of fuchsine, 50 parts of alcohol, and 100 parts of water; some drops were then added of a blue solution consisting of 0·25 part of methylene blue and 1000 parts of water. The result was a violet colour which in fresh milk persisted for at least 24 hours, but in milk which was not fresh the colour turned to red with a rapidity proportionate to the change which the milk had undergone.

The Association of Medical Students.

At the general meeting which took place recently the Association of Medical Students approved the action of the committee with respect to questions of medical teaching. The association resolved to continue its efforts for the improvement of the professional education of students, and expressed regret that no reform had as yet been introduced by the public authorities. The association desires the creation of a superior medical council composed half of professors of the faculty and half of nominees of the medical syndicates, with the conferment of voting powers on medical students' associations. On the ground that the organisation of medical education requires a reform in the system of hospital attendance, the association also asks for an inquiry having for its object a modification of the appointment of *externe*, for which there ought to be an examination open to all students. The association considers that all medical students ought to have held this appointment for at least two years preparatory to obtaining the diploma of Doctor of Medicine.

Jan. 23rd.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

Honours to Augusto Murri.

THE Italian record in commemorative celebrations is a brilliant one, and yesterday's "Onoranze ad Augusto Murri" at Bologna more than maintained the national tradition. The occasion was the thirty-fifth anniversary of that distinguished consultant's lectures from the chair of clinical medicine, and it filled the theatre of the Ospedale di Sant' Orsola with an imposing audience, in which all the students of the present year and scores of old pupils, now professors or practitioners, were reinforced by the teaching staff of the University and by many citizens of both sexes. The proceedings opened with a few words of congratulation addressed to the master by one of the students, words full of the loyalty and affection which Professor Murri never failed to inspire; and then followed Dr. Floriano Brazzola, the lecturer on pathological anatomy, who, speaking for the Società Medica over which he presides, dwelt on the gratitude he and other old pupils felt towards their teacher, to whom they owed obligations which seemed to them to increase with advancing years. Professor Brazzola concluded by announcing the publication of a "Festschrift," to which he and others of the older "Murriani" will contribute in honour of their chief. After him came the President of the Association of the Medici Condotti (divisional or communal practitioners), who indicated the value

of teaching like Murri's in a *métier* such as theirs, where individual resource still responded to the lessons which at once moulded and inspired the *mens medica*. A touching tribute from Dr. Vitali, a colleague in the Senatus Academicus of Bologna, to the "twice-blest" teaching of the master, "happy for the giver as well as for the receiver," closed the official addresses, in acknowledgment of which Professor Murri, visibly affected, rose to reply. A rapid survey of the medical field as he found it and as he had helped to leave it led up to a loyal appreciation of his own masters, respect for whom was best shown, he said, by research and observation carried on in their spirit with all the improved aids that science and invention, checked by experience, were pressing into the service. The "metodo sperimentale," of which Bacon and Galileo were the pioneers, was at once the agency and the guarantee of sound thinking and sound practice, constituting the lines of a progress without limit, insomuch (he added, with a touch of humour and pathos) that the young minds he was addressing might, another 35 years hence, recall the celebration of to-day with the remark, "Come il nostro vecchio insegnante sapeva poco!" (How little our old teacher knew!) And so, amid repeated rounds of applause, the veteran clinician and consultant sat down, to receive, later in the day and at his own house, messages of congratulation, by post and telegraph, from correspondents grateful to him on various grounds, not only as a master of the healing art, but as a contributor to medical literature at home and abroad.

The "Causa Causans" of Pellagra.

Presiding to-day at the first meeting of the commission instituted by himself on the cause or causes of pellagra—a commission composed of Professor Lustig, its working president, with Dr. Alessandrini, Dr. Antonini, Dr. Bertarelli, Dr. Giannelli, Dr. Gosio, Dr. Sclavo, Dr. Tizzoni, and the Hon. Signor Caetani, as assessors—Signor Luzzatti, the Prime Minister, opened the proceedings with a retrospect of the findings of previous workers in that field. Lombroso's theory as to its cause residing in unsound maize is now abandoned, but on the strength of that theory greater attention was paid to the conditions, dietetic and other, under which the agricultural labourer lived, and the result was, undoubtedly, a marked decrease in the mortality, particularly in the cases of lunacy due to pellagra—7·9 per cent., the proportion of such patients in asylums in 1898, having sunk to 3·5 per cent. in 1908. Tizzoni, holding Lombroso's theory to be untenable, ascribed the disease to a specific bacillus which he called the "strepto-bacillus pellagræ." This did not satisfy Alessandrini, who found the cause in a parasite infecting the surface of the potable water drunk in the fields, while Sambon traced it to the puncture of a minute insect which he designated the Simulium reptans. This finding seems to command pretty general favour, in accordance with which the commission is prosecuting its researches into the required prophylaxis and cure. Meanwhile it maintains the subsidiary measures introduced by Lombroso (the improved alimentation secured by "cucine economiche," *inter alia*) and the general amelioration of the conditions under which the rural population lives and labours.

Jan. 20th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Reward of Medical Honesty.

A FEW months ago an unexpected result followed the notification of a case of typhoid fever by a country practitioner acting also as district medical officer in a village near Linz, Hungary. On discovering the patient he at once notified the disease, as he was, in fact, bound to do, and in this case the duty of notification was exceptionally imperative as military manœuvres were about to take place in the district and a camp was to be formed in the village in question. In consequence, however, of the presence of the disease being notified to the military headquarters the camp was not formed there and the inhabitants lost the opportunity of selling articles of various kinds to the officers and soldiers. It could not be proved that they had sustained any actual financial loss because they had not made any special provision for the occasion, but nevertheless there was general indignation against the district medical officer, and this feeling was fostered until he was practically boycotted by the population. He and his household were even refused food and clothing in the village and the lives of the members of his family were endangered. Protests made by him were useless; he not only received no protection from the local authorities, who felt themselves aggrieved by the notification of the infectious case, but he was even dismissed from his appointment as district medical officer. In vain all the medical corporations tried to induce the population to take a reasonable view of the circumstances, but nothing would satisfy them short of the expulsion of the unfortunate man from the place. The medical organisation then issued a warning to prevent any other practitioner from settling there, as it was hoped that after some time the animosity of the villagers would subside, and in the meantime all endeavours were made to induce the Government to give an authoritative decision to the effect that the medical officer could not be blamed for having done his duty. But the worries and excitement of such a complicated situation, and the dread of losing his only means of livelihood, proved too much for the victim of this persecution, who was suddenly cut off by an attack of cardiac paralysis. The affair, however, is not at an end, because in medical circles an endeavour will be made to obtain substantial damages for the family of the wronged medical officer.

Midwives in Vienna.

The unsatisfactory position of the midwives in this city has for a long time been a burning problem for the sanitary authorities. One of the most frequent complaints is that overcrowding of this particular occupation is nowhere so manifest as here. For instance, whilst in Berlin with its larger population there are only 800 authorised midwives, in Vienna there are over 2000. This was pointed out a few years ago in a mass meeting of midwives, in which the speakers demanded the institution of a *numerus clausus* for their occupation, for under the present conditions there were many trained midwives in the city who had not one case of labour to conduct in a year. In the country districts the rate of payment was so bad that no woman of the better class cared to undertake the duties. The "midwife tariff," as it is called, stipulates a fee of approximately half a sovereign for an attendance of 10 days, including the delivery; this tariff has existed since the year 1845 and urgently requires revision. The insufficiency of the earnings of the city midwives naturally prompts many of them to undertake procedures of a criminal nature. As a rule, the poor women in this city prefer to go to one of the numerous hospitals for their lying-in, whilst the middle and upper classes always require the presence and active help of a gynæcologist and afterwards that of a surgical nurse. The total number of births is also steadily diminishing, whilst the number of midwives is increasing. This question therefore calls for reform.

Health of Vienna Labourers.

In the winter months there is usually an increase of illness among special sections of the population, and principally among the poorer members of the working-classes, a circumstance which is plainly shown by the report of the Krankencassa (sick club) of labourers, dealing with the health of its 310,000 members. In November and December, 1910, there were respectively 8995 and 8886 cases of illness incapacitating for work. Of these there were in November 793 and December 760 cases of illness caused by tuberculosis of the respiratory organs, whilst other diseases of these organs numbered 1364 in November and 1479 in December. In November there were among club patients 427 cases of tonsillitis, 312 cases of influenza, 287 cases of disorder of the circulatory organs, 522 cases of severe gastro-intestinal diseases, 803 cases of rheumatism, and 1766 cases of accident or injury. In December there were 327 cases of tonsillitis, 349 of influenza, 292 of disorder of the circulatory organs, 629 of severe gastro-intestinal disease, 793 of rheumatism, and 1908 of accident or injury. All the cases included in these returns were sufficiently severe to confine the patient to bed for at least three days. The mortality was nearly 3 per cent. of the patients, which compares well with the mortality in our general hospitals, where it is from 8 to 10 per cent. of the inmates, whilst the general mortality for Vienna

is 15 per 1000. Fully one-third of all deaths were due to tuberculosis of the lungs or larynx, whilst the other deaths due to disease of the respiratory organs only amounted to 6 per cent. The mortality due to circulatory disease was also high, being 22 per cent., whilst neoplasmata claimed 8 per cent. of the deaths. Of the cases of accident or injury 3 proved fatal in November and 7 in December, the aggregate mortality under this heading being about 0·33 per cent.

Jan. 20th.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

The Indian National Congress and Medical Problems.

THE Indian Medical Service came in for discussion at the Indian National Congress on Dec. 28th. Sir Balchandra Krishna moved a resolution requesting the Government of India to take early action in the direction pointed out by the Secretary of State regarding the employment of independent medical practitioners in the superior posts of the civil branch of the Indian Medical Service. The resolution also urged the constitution of a distinct Indian civil medical service wholly independent of the Indian Military Medical Service. The Indian Medical Service was created for the Indian army was the view forcibly brought to the notice of the members of that service by its Director-General. In the same speech the Director-General reminded the Indian Medical Service officers of the necessity of creating a better feeling between themselves and the officers of the Royal Army Medical Corps, and also between themselves and the general practitioners. Such words from one in his position go far to suggest that the time is approaching when an Imperial Army Medical Service may be organised, whose officers will do duty only in connexion with the army, a civil medical service as well as a separate sanitary service being also instituted.

A Sanatorium for Consumptives in the United Provinces.

A sanatorium for consumptives was the form decided upon for the United Provinces memorial to His late Majesty the King-Emperor at a representative meeting of official and non-official gentlemen at Allahabad held recently, presided over by the Lieutenant-Governor. This scheme, which is favoured by Sir John Hewett, is likely to receive very general support. A technological institute and a provincial orphanage have been mentioned as two alternative schemes, but owing to various difficulties that might arise in attempting to execute them they received no support at the meeting, which unanimously agreed to the sanatorium for consumptives. An influential committee was appointed to collect subscriptions and carry out the arrangements.

Courses of Instruction for Indian Medical Service Officers.

The Government of India has concurred in a proposal of its Sanitary Commissioner that the course of training in clinical bacteriology and technique at the Central Research Institute, Kasauli, for officers belonging to the Indian Medical Service (but not serving under the bacteriological department) should last for four weeks. Officers selected to attend this course will be permitted to be absent from their stations for this period, in addition to the actual time occupied by the journey to and from Kasauli and one day for preparation for each journey. The classes of instruction will in future assemble in the months of January, March, May, July, September, and November each year. No officer drawing allowances from local funds will, however, be allowed to proceed to Kasauli for a course of training in clinical bacteriology and technique unless he is prepared to forego those allowances or unless the local fund authorities agree to pay these allowances both to the officers permitted to go to Kasauli and to the officers appointed to act for them. In all other cases he will be entitled to retain any local allowance drawn by him immediately before he proceeded to Kasauli without prejudice to the claims to such allowance of the officers acting for him.

Medical Students at Lahore.

Among the colleges in Lahore, and affiliated to the Punjab University, the Medical College is the only one which is unprovided with a hostel or boarding-house. The Syndicate of the Punjab University considered recently a letter on this subject from the Inspector-General of Civil Hospitals, who had suggested that the University should insist either upon all medical students who could be accommodated living in hostels, or upon first- and second-year students doing so. The Syndicate was of opinion that any such rule should be made by the College rather than by the University, that the charge proposed was higher than in any other college in Lahore, and that in view of the changes to be made in connexion with the King-Emperor Edward VII. memorial scheme the question of hostel accommodation might stand over for the present.

The Status of Assistant Surgeons and Sub-Assistant Surgeons.

Mr. Robertson, Secretary to the Government of Bombay, replying to the resolutions regarding the registration of medical practitioners in India, which have been laid before Government, states:—

With reference to the opinion that military assistant surgeons and civil medical assistants (now styled sub-assistant surgeons) should not be classed as duly qualified medical practitioners for purposes of medical registration, I am to observe that Government have for many years educated two classes of medical practitioners, primarily for their own departments, and have received them into their service as military assistant surgeons and civil medical assistants on their undergoing a fixed course of training under competent teachers at certain medical schools and colleges. No "licence" or "diploma" has been granted to these men, but they have been given by Government all the privileges of qualified medical practitioners and have performed, as part of their routine work, all duties which could have been demanded of them had their qualifications been of the highest. The Governor in Council therefore does not agree in the opinion expressed by the meeting that members of both these classes, who have received regular training on Western lines and passed the recognised tests, should be regarded as "unqualified," and classed with vaids, hakims, Ayur Vedic doctors, apothecaries, &c. Government is not aware how far the views communicated by you are shared by the rest of the medical profession in the city of Bombay, but the fact that these two classes of men were included by the Bombay branch of the British Medical Association in the committee appointed by that body to consider the question of registration appears to be a strong evidence that the most influential medical men of Bombay are not in sympathy with the opinion expressed at the meeting. I am to add that in all countries the sole authority which lays down the conditions constituting qualifications for the legal practice of medicine and surgery is Government, and that after carefully considering the views expressed in your letter and the resolutions accompanying it, the Governor in Council sees no reason to exclude military assistant surgeons and civil medical assistants from the proposed registration of duly qualified medical practitioners. Other points touched upon in the resolutions will be duly considered by Government when the proposal to pass the Registration Act comes before them.

Retirement of Colonel J. Shearer, C.B., D.S.O., I.M.S.

The last *Gazette of India* contains the notification of the retirement from the service of Brevet-Colonel J. Shearer, Principal Medical Officer of the Derajat and Bannu Brigades. This officer has had a long and distinguished career in India and has seen much active service, including the Egyptian Campaign of 1882, the war in Burma 1887–8, Hazara Expedition 1891, Miranzai Expedition 1891, Waziristan Expedition 1894–5, and Tirah Expedition 1897–8. Colonel Shearer was for some time secretary to Sir Thomas Gallwey K.C.M.G., C.B., when Principal Medical Officer, His Majesty's Forces in India, and was closely associated with the far-reaching administrative reforms carried out by this officer during his tenure of appointment under Lord Kitchener. Colonel Shearer's retirement will be a great loss, not only to the Indian Medical Service, but to Freemasons throughout India, as he has done much to promote the interests of the craft in this country in which he filled various high offices with distinction.

Dr. C. A. Bentley.

It is understood that on the termination of his present appointment under the Bombay Government, Dr. Chas. A. Bentley, who has been doing special work on malaria, will be appointed Deputy Sanitary Commissioner of Eastern Bengal and Assam.

Jan. 5th.

NEW ZEALAND.

(FROM OUR OWN CORRESPONDENT.)

Vital Statistics.

RECENT vital statistics show a steady decline in the birth-rate, but New Zealanders may take some comfort in that while the births are few the rate is higher than it is in Australia. The average number per family for the ten years, 1890–99, showed 4·22 births per marriage, while for the period 1900–09 it was 3·22. It would appear that 46 out of every 1000 children born were born out of wedlock. In these

cases more than half the mothers were under 23 years of age. Five were 14 years of age, 9 were 15 years, 34 were 16 years, 63 were 18 years, 146 were 19 years, 101 were 20 years, 103 were 21 years, 85 were 22 years, and 89 were 23 years of age. According to the Registrar-General, the expectation of life for males is 54·44 years. It would appear that the influence of the Chinese consul is making for less restrictive measures with respect to the admission of immigrants from China. At present, in addition to a poll-tax of £100 every Chinaman had before admission to read and write some sentences in a European language. By a Government Bill introduced recently, the Governor takes power to modify these conditions. It must not be presumed from this, however, that there will be any relaxation in the campaign in favour of a white New Zealand. From the report of the inspector of mental hospitals it would appear that there are 3549 people in these institutions. This means that one in every 280 of the people of New Zealand is insane. The proportion is, perhaps, slightly greater because there are some who are looked after by their friends. The ratio would appear to have increased since last year. Males show 1 in 253, females 1 in 318. As to the causes, heredity seems to be responsible for 14·36 per cent.; critical periods, 14·2 per cent.; mental stress, 9·6 per cent.; while alcohol is credited with only 4·9 per cent. The average gross cost per head is £34 13*s.* 3½*d.*

Vaccination.

The same tale has to be told with respect to vaccination. Only some 4·3 per cent. of the children born last year were vaccinated. The steady decrease in the number of the children protected is a matter for grave concern, but, alas, those in authority pay little attention. An amendment to the Public Health Act was introduced by the Government towards the end of last session, but, like many others, it would seem only to have found a place on the order paper so that it might form one of the "innocents" yearly thrown to sacrifice. The proposal was practically to delete all semblance of compulsion from the Act governing vaccination, but in case of small-pox appearing in any part of the Dominion the Governor was to have power to declare an "infected area," and to require all inside that area to be vaccinated. At the present time the law is practically a dead-letter, and to allow it to remain upon the statute book and not to enforce it is wrong. It should be remembered that the disobedience to the law is the result of carelessness rather than any active opposition, although there are, of course, the section who are continually declaiming against the interference with "personal rights."

Dec. 19th, 1910.

UNITED STATES OF AMERICA.

(FROM OUR OWN CORRESPONDENTS.)

The Society of Sanitary and Moral Prophylaxis.

THE object of this society is to endeavour by all possible means to decrease the spread of venereal diseases. Dr. Prince A. Morrow is the president of the society. The society includes in its membership prominent members of the medical profession, as well as laymen and laywomen of note. A public meeting of the society was held in the New York Academy of Medicine on Dec. 22nd, 1910, and was largely attended, the majority of the audience being women, Dr. Morrow being in the chair. An address was delivered by Professor E. R. A. Seligman of Columbia University on the sanitary supervision of prostitutes. It was a vigorous criticism of the Payne Bill passed recently in the State of New York, with a view of checking venereal diseases by partial measures for regulating prostitution. Much opposition has been developed against the Bill, especially against Clause 79 for the sanitary supervision of prostitutes. There is a great aversion in this country to any kind of regulatory measures, and in his address Professor Seligman gave expression to this sentiment in strong terms. Furthermore, the argument was brought forward that the Payne Law is not far-reaching enough to be of any use. At any rate, there can be little doubt that the systems of regulating prostitutes in vogue in Europe will not meet with favour in this country. Dr. Stephen Smith, the Nestor of the medical profession in New York, and one of the pioneers of the New York Board of Health, read a paper on the powers of the health board to control venereal disease. He pointed out that these powers are arbitrary, almost autocratic, and that therefore sufficient authority is vested in this board to deal with the matter as its members may think fit, and that, so far as New York City is concerned, the board of health is perfectly competent from all points of view to meet the situation. Dr. A. Jacobi, Dr. Darlington, and several others joined in the discussion, but the trend of all the speeches was in opposition to the regulation of prostitution as a means of controlling venereal diseases. The society itself does much, and hopes to do much more, by educative means, by the distribution of literature, and by lectures delivered in all parts of the country. The most interesting feature of the present widespread campaign in America against venereal disease is the manner in which everywhere the matter is publicly discussed. Not long ago the subject was entirely tabooed. Now public meetings are held, at which women, not only mothers of families but even girls, are present, where sexual hygiene and venereal diseases are made the subjects of free and open debate.

Preventable Insanity.

A meeting of the New York State Charities Association at the New York City Academy of Medicine on the evening of Dec. 23rd passed resolutions to the effect that fully 70 per cent. of the cases of insanity received into our asylums are preventable, and that an immediate campaign of education should be instituted among the people. Among the 70 per cent. of preventable cases the association classed those induced by alcohol and drug habits, by various infections, auto-intoxications, emotional strain, and overwork. During the past decade, while the population of New York State has increased less than one-half, the number of known cases of insanity has doubled. Last year 6400 new cases were admitted to the asylums, a net increase of 1200. Much of this increase is apparent, however, owing to improved methods of diagnosis and to more attention being paid to the insane.

The Plea of Insanity in Murder Cases.

The Society of Medical Jurisprudence of New York City at a recent meeting has discussed the question of the frequent escape of murderers from capital punishment on the plea of insanity. At present juries are obliged to acquit prisoners adjudged insane. The society recommended a change in the law so that a verdict might be rendered "guilty but insane," which would lead to the immediate incarceration of the prisoner in an asylum for the criminal insane, but would not absolve him from the usual penalty if he should at some future time regain his reason. A distinction would thus be established between insanity at the time of the commission of a crime and insanity at the time of trial, and the latter would not save the life of a prisoner adjudged guilty if he finally recovered. Doubtless the death penalty would never be exacted in such cases.

The Cost of Hospital Patients in New York.

In announcing the Hospital Saturday and Sunday collections this year the association in charge thereof has drawn attention to the fact that in ten years the cost of treating a patient has incresed 100 per cent. In 1900 the daily cost of each patient was 4*s.* 10½*d.*, whereas to-day it amounts to 8*s.* 10*d.*

The Federal Government and the Rotten Egg Traffic.

The Federal Government is prosecuting several firms for selling to bakers eggs in an advanced stage of decomposition, to which practice I referred in THE LANCET of Jan. 7th, p. 66. Such eggs have a legitimate market among manufacturers of varnish, but bakers have been purchasing them at nearly ten times the regular market price. It appears that the hydrogen sulphide disengaged from such eggs is used in place of carbon-dioxide in raising bread and cake. They have been sold in bulk by the pound, the shells being discarded and formaldehyde added to the putrefying mass of yelks and whites, which is then frozen and disposed of in that condition. An analysis of this precious mess showed 8,000,400,000 micro-organisms to the cubic centimetre.

Exercise for Naval Officers.

The famous Roosevelt "tests" for officers of the navy have been abolished, and the new regulations demand only a quarterly exercise by officers of the navy and public health

and marine hospital service. They will be obliged to walk 25 miles in two consecutive days, five consecutive hours being allowed for each day, and the walk of 12½ miles each day is not to be completed in less than four hours. Physical examinations will precede and follow each test, and officers found unfit will be ordered before a retiring board.

Naval Dental Officers.

The Congressional House Committee on Naval Affairs has recently reported favourably on a Bill entering members of the dental corps as acting assistant surgeons, with provision that after 11 years' service there may be developed from them automatically one lieutenant-commander, four passed assistant surgeons, and 25 assistant surgeons.

Smoking Automobiles.

Federal legislation is being sought for protection of the pedestrian public against smoking automobiles, which have become veritable nuisances everywhere, and a probable menace to health.

Jan. 18th.

Obituary.

HENRY POWER, M.B. LOND., F.R.C.S. ENG.,

LATE VICE-PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND; AND CONSULTING OPHTHALMIC SURGEON TO ST. BARTHOLOMEW'S HOSPITAL AND THE WESTMINSTER OPHTHALMIC HOSPITAL.

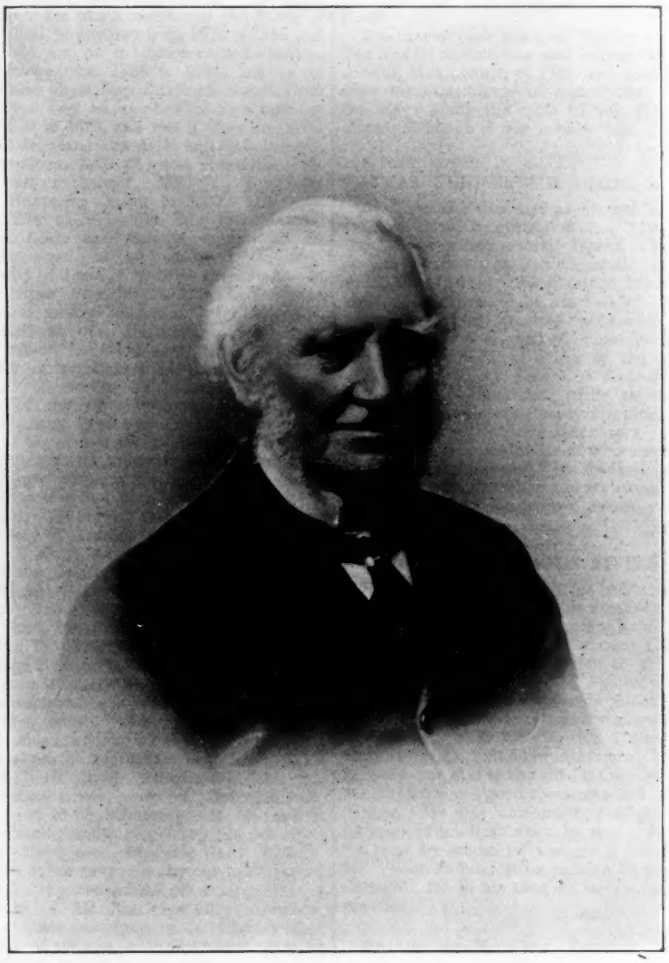
WE deeply regret to announce the death of Mr. Henry Power, consulting ophthalmic surgeon to St. Bartholomew's Hospital, and for more than 40 years a regular member of the staff of THE LANCET, the sad event having occurred at his residence, Bagdale Hall, Whitby, on Wednesday, Jan. 18th.

Henry Power was born at Nantes in France on Sept. 3rd, 1829, the only child of Captain John Francis Power by his second wife Hannah, daughter of Mr. Henry Simpson, of Meadowfield, Whitby, Yorkshire. His father came of a long line of soldiers, and received his first commission at the early age of 14 years. He served through the Peninsular, Baltic, and Waterloo campaigns, and received the Peninsular medal (1793–1814), with a clasp for Sahagun and Benevente, as a cornet in the 3rd Dragoons King's German Legion, and the Waterloo medal as a lieutenant in the 3rd Regiment of Hussars K.G.L. He was afterwards captain and major in the 35th (Royal) Sussex Regiment, "the Old Orange Lilies," and at the time of his death in 1856 he was lieutenant-colonel in command of the British Foreign Legion at Shorncliffe. Immediately after his birth Henry Power was taken to Barbados, where his father was quartered, and narrowly escaped death in the hurricane which devastated the island on the morning of August 11th, 1831, when the barracks were blown down, killing the sergeant-major, a sergeant, and five privates. Major Power resigned his commission in 1833, and for many years spent the wandering life which was then usual with half-pay officers who had no private means. His son, therefore, was educated for short periods at schools in Gloucester, Liverpool, Cheltenham, Leamington, and Whitby, never remaining long enough at any place to receive a thorough grounding in classics and mathematics. His name appears in the lists of Cheltenham College as a day boy admitted at Easter, 1842, the college having been opened in the previous autumn. Having decided to adopt the profession of medicine, he was apprenticed to Mr. Thomas Lowe Wheeler in 1844, who was afterwards chairman of the Board of Examiners at the Apothecaries' Hall. Mr. Wheeler was the son of Thomas Wheeler (1754–1847), the botanist, who was apothecary to St. Bartholomew's Hospital. The apprentice lived with his master in Newcastle-court, Gracechurch-street, E.C., entered St. Bartholomew's Hospital, and was diligent in attending the early morning botanical lectures and the herborisings which were then a feature of the medical curriculum.

The result of this botanical training enabled Mr. Power to win the Galen silver medal and the Linnæan silver medal given annually by the Society of Apothecaries, and in 1851 he was admitted a Licentiate of this body. In the same year he took the Membership of the Royal College of Surgeons of England, and on Dec. 1st, 1854, he was elected F.R.C.S. Eng. At the same time he was graduating in medicine at the University of London where he had a brilliant career. He took the prize in chemistry at the matriculation examination, the exhibition and gold medal in anatomy and physiology, and the gold medal in structural and physiological botany at the intermediate examination in medicine in 1852, the scholarship and gold medal in physiology and comparative anatomy, and the scholarship and gold medal in surgery at the Final M.B. examination, graduating M.B. in 1855. Four years before, that is in 1851, he had been appointed demonstrator of anatomy at the Westminster Hospital, and for the next ten years he lectured successively on comparative anatomy, human anatomy, and physiology at that school. He was appointed assistant surgeon to the Royal Westminster Ophthalmic Hospital in 1856 and assistant surgeon to the Westminster Hospital in 1857. The latter post he resigned in 1867, when he was elected ophthalmic surgeon to St. George's Hospital. In 1870 he resigned his position at St. George's Hospital to become the first ophthalmic surgeon at St. Bartholomew's Hospital, a position which he held for nearly a quarter of a century. For 12 years he was ophthalmic surgeon to St. Bartholomew's Hospital at Chatham, where he attended every Wednesday afternoon, leaving London at 2 o'clock and arriving in town again at 6, and as by this time his private practice was very large, it will be seen that throughout his long professional career his life was an extraordinarily industrious one.

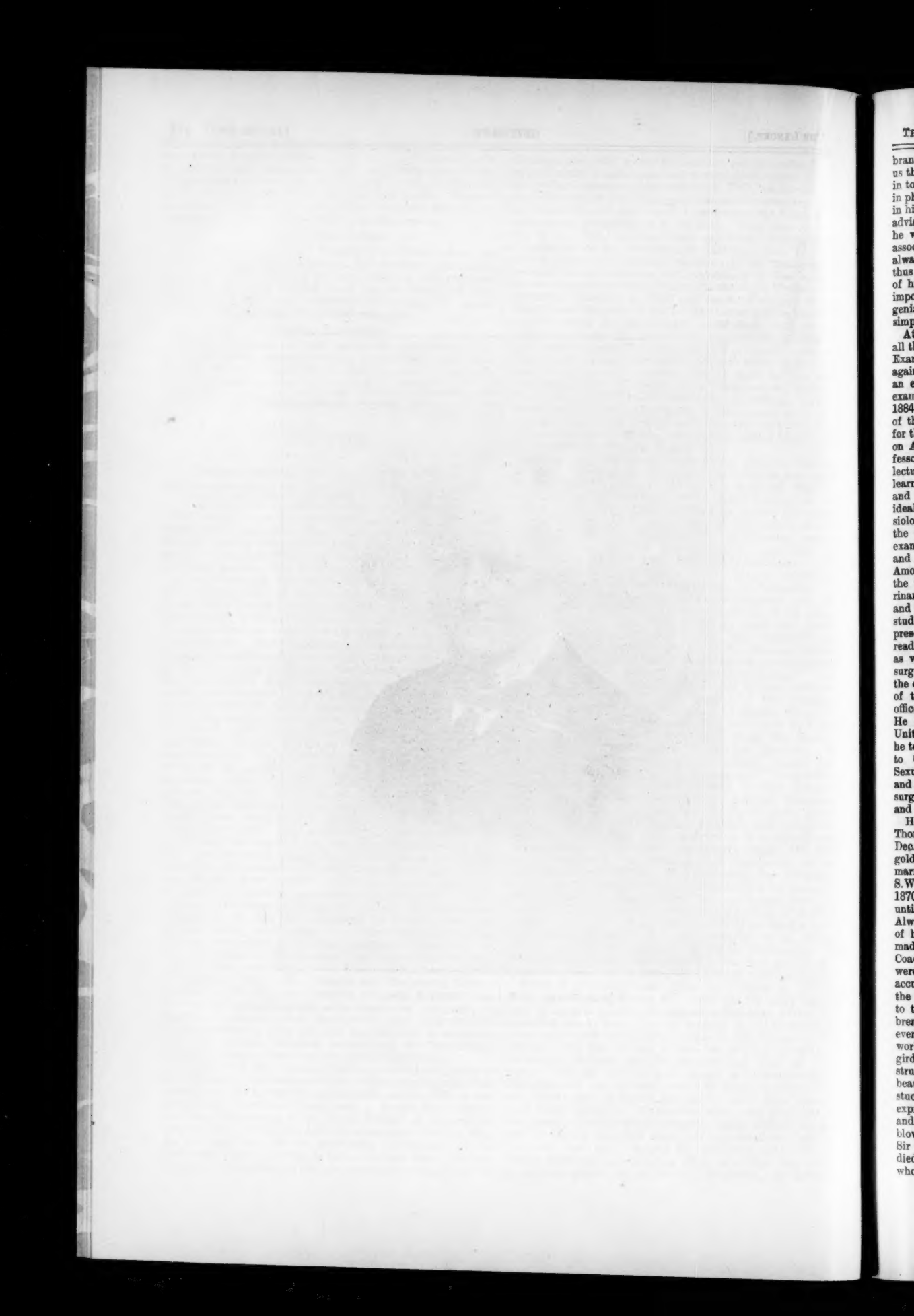
Mr. Power's varied literary work showed well his industry and wide range of exact knowledge. In 1863 he translated for the New Sydenham Society the work of Wilhelm Kramer of Berlin, entitled: "The Aural Surgery of the Present Day." From 1864 to 1876 he edited the sixth, seventh, eighth, and ninth editions of Carpenter's famous "Principles of Human Physiology." The following excerpt from a review of the seventh edition, published in THE LANCET of April 10th, 1869, bears testimony to the essential characteristics of his work: "It is in all respects an admirable work, and we congratulate Dr. Carpenter on having secured the services of a man endowed with the ability, learning, and conscientious exactitude of its editor, Mr. Power. We almost regret, with so much new matter on the one hand, and the recasting and reconstruction of the old on the other, that Mr. Power did not rewrite the book, for the production of a new edition so complete as the present one must have caused him infinite labour." As a matter of fact, Power may almost be said to have rewritten each edition. In 1869 "Illustrations of the Principal Diseases of the Eye" was published by Messrs. Churchill, the original coloured drawings having been made by Power himself from the patients who came under his observation at the Royal Westminster Ophthalmic Hospital. In 1870 he translated for the New Sydenham Society Professor Stricker's "Manual of Human and Comparative Histology." This publication formed a very valuable and welcome addition to English medical literature. The translator's own knowledge of the subject, joined to his familiarity with the German language and his mastery over his own, resulted in the production of a volume that betrayed scarcely a trace of its foreign origin. In 1876 Power translated, for Ziemssen's "Cyclopædia of the Practice of Medicine," Erb on "Diseases of the Peripheral Cerebro-spinal Nerves," and from 1879 to 1899 he re-edited, for the New Sydenham Society, in conjunction with Dr. Leonard Sedgwick, Mayne's "Expository Lexicon of Medical Terms." The new edition was planned on so large a scale, that the last volume, P to Z, was completed by Mr. George Parker. In 1884 his "Elements of Human Physiology," one of Cassell's manuals, was published, was very highly commended by the medical press, and obtained wide popularity.

When it is remembered that in addition to all his literary and official duties Mr. Power was for many years a leading London ophthalmic surgeon whose wise advice and manual dexterity were daily in demand, it will be wondered what time over he could have to place at the disposal of this journal. The fact is that he was an untiring as well as a methodical worker, and his industry and love of order enabled him not only to keep abreast of ophthalmological literature, but also to read widely in anatomy, physiology, and botany, and to record his candid views upon what he read with regularity. Week after week, year after year, in this manner he sat in genial judgment upon medical writers, and so closely accurate were his appreciations, and so obviously fair and friendly his strictures, that we can hardly remember an occasion when an author was moved to protest against his criticisms. Gradually, as different



HENRY POWER, M.B. LOND., F.R.C.S. ENG.,

LATE VICE-PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND; CONSULTING OPHTHALMIC SURGEON TO ST. BARTHOLOMEW'S HOSPITAL.



branches of science underwent development, Power advised us that it was time for us to seek the help of some one more in touch with special work in zoology, botany, and, lastly, in physiology; but for many years in these subjects as well as in his particular subject of ophthalmology he was our general adviser. No member of the staff was ever more missed than he was when retirement from London broke his intimate association with us, and in this office his memory will always be cherished. And the feeling of regret that we can thus personally express will, we know, be shared by hundreds of his colleagues, pupils patients, and friends, for it was impossible not to feel that Power's handsome presence and genial bearing were the exterior that fitted well a generous, simple, strenuous nature.

At the Royal College of Surgeons of England he filled nearly all the official positions. He was a member of the Board of Examiners in anatomy and physiology from 1875 to 1880 and again from 1881 to 1884, and on the reconstituted board as an examiner in physiology from 1884 to 1886, and as an examiner in anatomy and physiology for the F.R.C.S. from 1884 to 1886. He served two terms of office as a member of the Council from 1879 to 1890, and was a Vice-President for the year 1885. He delivered the Arris and Gale lectures on Anatomy and Physiology, 1882–83; was Hunterian Professor of Surgery and Pathology, 1885–87; Bradshaw lecturer, 1886; and Hunterian Orator in 1889. His wide learning, his particularly clear insight into his subjects, and his kindness of heart and manner made him an ideal examiner. He acted as an examiner in physiology at the University of London in 1870, as examiner in the natural science tripos at Cambridge in 1874–75, as examiner in the school of natural science at Oxford 1875–77, and he also examined at the University of Durham. Among other posts which he filled may be enumerated the office of professor of physiology at the Royal Veterinary College 1881–1904, where he became the friend and trusted adviser of many generations of veterinary students. On his retirement he was much touched by their presentation to him of an arm-chair fitted with an electric reading-lamp and furnished with an appropriate inscription, as well as by a separate presentation from the veterinary surgeons in South Africa who had been too late in joining the original testimonial. He served the office of President of the Harveian Society of London for a double term of office during the years 1880–81, a unique tenure of the chair. He was President of the Ophthalmological Society of the United Kingdom 1890–92; Bowman lecturer in 1887, when he took for his subject "The Relation of Ophthalmic Disease to Certain Normal and Pathological Conditions of the Sexual Organs"; and a Vice-President of the Royal Medical and Chirurgical Society 1892–93. For many years he was surgeon to the Linen and Woollen Drapers' Benevolent Fund and to the Artists' Benevolent Society.

He married his first cousin Ann, daughter of Mr. Thomas Simpson, of Meadowfield, Whitby, Yorkshire, on Dec. 21st, 1854, with whom in due course he celebrated his golden wedding day. He lived immediately after his marriage at 3, Grosvenor-terrace, now 56, Belgrave-road, S.W.; in 1866 he moved to 45, Seymour-street, W.; and in 1870 to 37a, Great Cumberland-place, where he remained until he retired to his house, Bagdale Hall, Whitby. Always a hard worker, as we have seen by our brief record of his professional life, the necessities of a large family made the earlier years of his life especially strenuous. Coaching students for their examinations and literary work were the chief sources of income, and for many years he accustomed himself to go to bed at two or three o'clock in the morning and to awake at six, when he was ready to go to the baths with his boys or to the parks for a run before breakfast, or in later years for a bicycle ride. Many pleasant evenings were spent with T. K. Parker at a time when he was working first on the foraminifera, later on the shoulder girdle and sternum in the vertebrata, and, finally, on the structure and development of the frog's skull. Parker's beautiful dissections made with a pair of sewing needles stuck into penholders and his harmless eccentricities of expression and of thought were a constant theme of wonder and amusement, and his death was the first of a series of blows which saddened the later years of Mr. Power's life. Sir William Savory, his life-long friend and companion, died in 1895; Mr. Bowater J. Vernon, his colleague with whom he was in daily communication, in 1901; and the dreadful tragedy when his artist daughter and his granddaughter were drowned before his eyes and he was himself rescued with difficulty finally decided him to leave London for a more restful life in congenial surroundings.

Mr. Power was a skilful artist both in water colours and with a brush and indian ink, and in early life he played the violin. His artistic powers he inherited from his father, who had received a commission from H.R.H. the Duke of York in return for a pair of water-colour sketches which he had ventured to send as a present to the Commander-in-Chief with a letter asking for employment as the son of a Peninsular veteran. These powers he transmitted to one daughter—Lucy Beatrice—who exhibited at the Royal Academy on more than one occasion and was making for herself a reputation as a portrait painter at the time of her tragic death.

The funeral took place at Whitby on Saturday, Jan. 21st. The funeral service was read impressively by the Rev. George Austen, M.A., canon of York and rector of Whitby. There were numerous tokens of regard from his fellow townsmen, the shops along the route of the funeral being nearly all closed, although it was market day.

THOMAS FULLER, M.D. ABERD., M.R.C.S. ENG., L.S.A.

Dr. Thomas Fuller died at his residence, Penryn, Wilbury-avenue, Hove, Brighton, on Jan. 13th, at the age of 83. Born at the county town of Lewes in Sussex, he received his medical education at Guy's Hospital, qualifying as M.R.C.S. and L.S.A. in 1851. He obtained his M.D. degree at King's College, Aberdeen, eight years later. Settling at Shoreham he founded a large practice over a wide area of the Steyning Union and held a number of public appointments, among them that of medical officer of the workhouse, surgeon to the Royal Artillery, Shoreham Redoubt, Admiralty surgeon and agent for Shoreham; while at one time he was house surgeon at the Sussex County Hospital, Brighton, and house surgeon at the Brighton Dispensary. He took a very active interest in the public life of Shoreham, which he left some 15 years ago on retiring from medical practice. The funeral took place in Shoreham churchyard on Dec. 18th amid manifestations of the deepest sorrow and regret.

BANFIELD TEAGUE VIVIAN, L.S.A. LOND.

Mr. B. T. Vivian died at his residence, Buckshead, Hayle, Cornwall, on Jan. 13th, in his ninetieth year. The deceased, who was the oldest medical practitioner in Cornwall, was the son of the late Dr. John Vivian of Crowan, Cornwall. He received his medical education at the Charing Cross Hospital and Hunter's School of Anatomy, and qualified L.S.A. in 1848. He shortly afterwards joined his father in practice at Crowan. Mr. Vivian was for more than 50 years district medical officer to the Helston Union. He took a great interest in the Volunteer movement and was at one time honorary surgeon to the old 1st Cornwall Volunteer Artillery. Mr. Vivian was a good sportsman and an authority on horticulture. He was unmarried, very popular, and during his 63 years of medical work he was always extremely kind to the poor, by whom he was much beloved. By the death of Mr. Vivian an interesting personality has been removed from Cornwall, for in his time he had a very large and extensive practice.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Karl Friedrich Mosler, who retired from the chair of clinical medicine in the University of Greifswald about a dozen years ago. Soon after qualification, when assistant in the Giessen Medical Clinic, he worked under Professor Leuckart, the eminent zoologist, at human parasitology, and amongst his various writings several of the most noteworthy deal with this subject. He contributed (in conjunction with Dr. Peiper) the article in "Nothnagel's Handbook" on Animal Parasites and that on Diseases of the Spleen in "Ziemssen's Handbook." He was in his eightieth year.—Dr. Wilhelm Koenig, formerly senior physician to the Dalldorf (in Prussia) Lunatic Asylum, from which post he had been obliged to retire some years ago on account of ill-health. His age was 52 years.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held recently the following candidates passed in the subjects indicated:—

Surgery.—M. J. A. Des Ligneris (Sections I. and II.), Berne; and B. W. Loewenberg (Sections I. and II.), Berlin and London Hospital.
Medicine.—G. J. F. Elphick (Sections I. and II.), St. Mary's Hospital; B. W. Loewenberg (Section II.), Berlin and London Hospital; and F. G. Norbury (Section I.), Glasgow.
Forensic Medicine.—N. S. Adler, Berlin; J. Ellison, Cambridge and St. George's Hospital; and R. G. Maglione, Manchester.
Midwifery.—A. J. V. Mathews, St. Mary's Hospital; and H. Rowntree, Middlesex Hospital.

The Diploma of the Society was granted to the following candidate, entitling him to practise medicine, surgery, and midwifery: B. W. Loewenberg.

FOREIGN UNIVERSITY INTELLIGENCE.—*Breslau:* Dr. Lothar Dreyer has been recognised as *privat-docent* of Surgery, and Dr. Walter Oettinger as *privat-docent* of Hygiene.—*Cairo:* Dr. Schmidt, of the Chemical Department of the Medical School, has been granted the title of Professor by the Prussian Government.—*Genoa:* Dr. Pietro Baiardi has been promoted to the chair of Ophthalmology.—*Halle:* Dr. Alfred Denker, Professor in Erlangen, has accepted the chair of Otology in succession to the late Dr. H. Schwarze.—*Jena:* Dr. Bodo Spiethoff, *privat-docent*, of Dermatology, and Dr. Wilhelm Strohmayer, *privat-docent* of Psychiatry and Neurology, have been appointed Extraordinary Professors. Dr. Rehn of Königsberg has been recognised as *privat-docent* of Surgery.—*Messina:* Dr. Arturo Donaggio has been promoted to the chair of Neurology and Psychiatry.—*Rostock:* Dr. H. Reinmöller, *privat-docent*, has been appointed Extraordinary Professor of Odontology.—*Stuttgart:* The Veterinary College has been authorised to grant the degree of Doctor of Veterinary Surgery.

CENTRAL MIDWIVES BOARD.—A meeting of the Central Midwives Board was held at Caxton House, Westminster, on Jan. 19th, Sir Francis Champneys being in the chair. The difficulties experienced by local supervising authorities in obtaining convictions under Section 1 (2) of the Midwives Act, 1902, led the Board to suggest to the Privy Council the desirability of amending the Midwives Act, 1902, Section 1 (2), by omitting the words "habitually and for gain," with a view to the more effective administration of the Act. In reply to an inquiry from the medical officer of health of Sheffield as to the extent of a midwife's obligation to visit her patient during the puerperium, the Board stated that it had designedly refrained from making it obligatory on the midwife in every case to attend her patient for ten consecutive days, and that the number of visits required must vary according to the circumstances of each case, the midwife remaining responsible if anything went wrong with the patient owing to the omission of a visit, and that any visit paid by an assistant should not be in substitution for, but in addition to, a visit of the midwife. Letters were considered from the superintendent and the matron of the Government Maternity Hospital, Madras, requesting the Board to hold examinations in Madras. The Board regretted that it was impossible to accede to the application. The Worcestershire county council requested the Board to state the grounds on which it came to the decision to take no further action in the case of a certified midwife against whom the local supervising authority had found a *primâ facie* case of misconduct. Being entirely in sympathy with any endeavour to remove from the Roll the name of a midwife who had been proved to be drunk on duty, the Board regretted as much as the local supervising authority the failure of any such case for want of complete legal proof, but responsibility for the decision in any particular case must remain with the Board alone, and in the case in question the Board, after careful consideration of all the available evidence, came to the conclusion that the charges had not been proved beyond all reasonable doubt. The Devon county council requested the Board to make a rule enabling uncertified women practising as midwives to be granted certificates without examination up to March 31st next. The Board regretted that it could not accede to the request. Dr. J. R. Currie, medical officer of health of Chester, asked the advice of the Board as to taking action against a certified midwife for breaches of the rules. The Board pointed out that it is the duty, under Section 8 (2) of the Midwives Act, 1902, of the local supervising authority and not of the Board to find whether a *primâ facie* case of malpractice, negligence, or misconduct had been established. Sir George Fordham called attention to Clause 7 of the Midwives Bill (No. 2), 1910, and moved a resolution that the Lord President of the Privy Council be asked to receive a deputation from the Central Midwives Board to lay before him the serious objections to this clause of the Bill and the difficulties that must arise if it became law. He contended that the Midwives Roll by this clause would be reduced to an annual list, and that the official machinery for dealing with such annual notification would be very expensive and practically unworkable. Clause 7, relating to proposed annual fee of 1*s.* for keeping a midwife's name on the Roll, is as follows:—

7. Every certified midwife shall on or before the thirty-first of January in each year send to the Central Midwives Board on a form to be supplied by the Board for the purpose her name and address, together with a fee of one shilling, and if any certified midwife in any year fails to comply with this requirement her name shall be removed from the roll and thereupon her certificate shall be deemed to be cancelled; but where her name has been so removed on account of such non-compliance she shall at any subsequent time be entitled to have her name restored to the roll and the cancellation of her certificate rescinded on the payment of a fee not exceeding five shillings.

Mr. E. Parker Young moved an amendment to add Clause 11 (1) of the Midwives Bill (No. 2), 1910, to Sir George Fordham's resolution. Mr. Parker Young pointed out that Clause 11 was objectionable because it meant interference with the practice of medical men. Clause 11 (1) of the amending Bill runs as follows:—

Where a woman certified under the principal Act, who has not given to the local supervising authority such a notice as is mentioned in Section 10 of the principal Act, or a woman not so certified attends any woman in child-birth in any capacity other than that of a midwife, and a duly qualified medical practitioner is not present at the time of the birth, she shall, within forty-eight hours from the birth, give to the local supervising authority notice in writing of the fact that she so attended, and if she omits to do so shall be liable on summary conviction to a fine not exceeding *five pounds*, but nothing in this section shall be construed as exempting any woman practising as a midwife, or holding herself out as so practising, from the obligation to give any notice which, under Section 10 of the principal Act, she is required to give.

The Secretary showed that, to meet the provisions of Clause 7, the staff of the Board would have to be increased and other premises provided, and declared that the clause would seriously cripple the power of the Board. The amendment was lost, and the resolution moved by Sir George Fordham was carried.

PROFESSOR DELEPINE ON BOVINE TUBERCULOSIS.—On Jan. 23rd, at Knutsford, Professor Sheridan Delépine addressed an assembly of farmers on the subject of bovine tuberculosis. He noted the great differences as to the supply of tuberculous milk to Manchester from different districts, varying from 10·5 per cent. of the farms in some districts to 29·7 in others. These farms that produced tuberculous milk were on the whole in a worse condition as to cleanliness than those which did not, but there were striking exceptions, and it was quite clear that cleanliness alone was not a sufficient safeguard. Careful observation tended to show that tuberculous cows "emitting discharges either from the throat or in the form of excreta formed the chief determining factor in the distribution of bovine tuberculosis." Previous to the ulcerative stage the cows were not an active source of danger. But it was necessary that every animal should be inspected and those actively affected removed without delay, and healthy animals should not remain in places which had been used by infected ones. Professor Delépine would reduce as far as possible the number of old animals which were always liable to be the worst affected. The weeding out of tuberculous cows could be done at small cost if it were done while they were under three years old, when they were at their greatest meat value. "At that age, after the slightly affected parts had been removed, the carcass would be perfectly fit for consumption, but at a later age the whole body would probably be condemned at the abattoir, and the loss would be considerable." In the "conquest of consumption" every means must be made use of for preventing the access of tubercle bacilli to the human body, and Professor Delépine is doing good service by endeavouring with such persistent perseverance to close one avenue of

approach. There has been already a great improvement in the milk-supply of Manchester, but the need for watchfulness and care remains as great as ever.

ROYAL SOCIETY OF MEDICINE.—In consequence of the large attendance expected the special general meeting of the Fellows of the Royal Society of Medicine, announced for Tuesday next, Jan. 31st, at 5 P.M., will be held at the Steinway Hall, 15, Lower Seymour-street, London, W.

THE British Institute of Social Service and the Coal Smoke Abatement Society are holding a conference on the "Smoke Evil" at 4, Tavistock-square, London, W.C., on Jan. 30th, at 5 P.M.

DONATIONS AND BEQUESTS.—Under the will of the late Mr. William Henin Christie, the Hastings, St. Leonards, and East Sussex Hospital will receive between £8000 and £10,000.—The Merchant Taylors' Company have voted £1000, payable in annual instalments of £500 each, towards the special fund for the reduction of the capital debt of St. Bartholomew's Hospital.—In connexion with the King's College Hospital Removal Fund, £1000 have been received from Mr. Mortimer Singer for the purpose of naming a bed in the new hospital, and a further £1000 from Mr. F. C. Yates.—Lord Winterstoke has given £5000 towards the cost of the proposed extension of the Bristol General Hospital.

PRESENTATIONS TO MEDICAL MEN.—Mr. T. Gunton Alderton, on his retirement from the post of senior anæsthetist at the West London Hospital after 34 years' service, has been presented by his colleagues on the staff with his portrait, excellently painted by Mr. Edward Mills. The presentation was made by Mr. F. Swinford Edwards at a staff dinner held at the Great Central Hotel, Marylebone. Mr. Alderton is the treasurer and a late president of the West London Medico-Chirurgical Society, a member of the board of management of the West London Hospital, and is professionally associated with several public and philanthropic societies in the Hammersmith district.—A presentation was made at Broughton Astley, Leicestershire, on Jan. 20th, to Mr. E. C. Austin, F.R.C.S. Edin., who is removing from Leicester to Salford. The presentation consisted of an oak bureau and bookcase, and a framed and illuminated address.

THE BROWN DOG.—The case of "the brown dog" was referred to at a meeting of the Battersea borough council on the evening of Jan. 11th. The council was notified that the police precept had been increased by an amount representing ¼*d.* in the £. One of the ex-mayors, who took a part in the inauguration of the Brown Dog Memorial, moved that the Commissioners of Police should be asked to reduce the precept by £700. That, he said, was the amount which was stated to have been spent per annum in providing special protection for the brown dog. As the memorial had been removed, of course the £700 were being saved. The motion was seconded by another ex-mayor, who announced that the memorial would have to be restored by the council before very long. Several members pointed out that the cost of special protection was not, as it ought to have been, made a charge on Battersea, but was spread over the whole of London. It would, therefore, be absurd to adopt the proposal. The great majority of the council being of this opinion, the motion was lost.—On the same evening the council decided to adjourn for six months the consideration of the Local Government Board Order authorising metropolitan borough councils to provide a temporary supply of diphtheria antitoxin and temporary medical attendance in connexion therewith for the poorer inhabitants. The subject was much discussed, and the adjournment was opposed for a long time, even by members who are anti-vaccinationists and anti-vivisectionists. Their position was that if there is anything good in antitoxin Battersea ought to have it for Battersea's poor, and ought to have it soon. Mr. S. H. Curry and Mr. J. T. Richards, who are medical practitioners, pointed out that there were dangers connected with the indiscriminate use of antitoxin and that risks attended its injection in dirty rooms. The object of the Local Government Board, Mr. Richards said, was to secure that patients might have the serum earlier than was now the case when they were removed to hospital. Battersea patients, however, could be in hospital within two or three hours after diagnosis. A report on the subject had been prepared by the medical officer of health (Mr. G. Q. Lennane) and had been considered by the health committee. It was decided on Jan. 18th that a copy of the report should be sent to every member of the council.

Dr. Kimmle, general secretary of the Central Committee of the Red Cross in Berlin, has been granted a patent of nobility by the Wurtemburg Government.

A COMMODIOUS children's clinic and sucklings' rearing establishment has been erected at Göttingen at a cost of over £8000 by the parents of Dr. Dreger, who died at an early age, for whose public health he was responsible.

ROYAL METEOROLOGICAL SOCIETY.—The council of the Royal Meteorological Society states that the increased number of applications for lectures on meteorological subjects shows that greater interest is now being taken by the general public in meteorological matters. The researches into the meteorological conditions of the upper atmosphere have been continued under the auspices of the joint committee appointed by the society and the British Association. At the annual meeting held on Jan. 18th, the President, Mr. H. Mellish, said that the completion of the third decade since the society undertook the collection of climatological observations suggested that the moment was opportune for taking stock of the data which had been collected in the British Isles and of the progress which has been made in reducing and discussing them, so he devoted his address to a consideration of the present position of British Climatology. Dr. H. N. Dickson was elected President for the ensuing year.

A NURSING PAGEANT.—The National Council of Trained Nurses of Great Britain and Ireland is planning a pageant, designed by Mrs. Bedford Fenwick, representing the evolution of trained nursing, to be held in the Connaught Rooms, Great Queen-street, London, W.C., on the evening of Saturday, Feb. 18th. The central figure will be Hygeia, goddess of health, supported by the elements, earth, air, fire, and water, and in her train will be the Spirit of Nursing and Science with their attendant attributes. A reception committee has been arranged, including the Lady Helen Munro Ferguson, the Lady Hermione Blackwood, the Dowager Lady Loch, Lady Mackinnon, Lady Beachcroft, Lady Wynne, Mrs. Bedford Fenwick, Mrs. Alec Tweedie, Mrs. Mackenzie Davidson, Mrs. Timbrell Bulstrode, Mrs. Walter Spencer, and a large number of hospital matrons and others interested in the organisation of the nursing profession. Hygeia, the goddess of health, will be impersonated by Miss Irene Fergusson, the Spirit of Nursing will be represented by Miss Audrey Campbell, and Science by Miss Winifred Bridger. Miss M. Mollett has written the masque. All information respecting the pageant, and tickets (reserved seats, 10*s.* 6*d.* and 7*s.* 6*d.*; unreserved seats, 5*s.*; and nurses' tickets, 3*s.* 6*d.*) can be obtained from the pageant secretary, 431, Oxford-street, London, W.

INVALID CHILDREN'S AID ASSOCIATION, BRIGHTON.—To the many agencies that are at work in Brighton and the sister town of Hove on behalf of the poor children another has now to be added—viz., the Invalid Children's Aid Association, which has just completed the first year of its existence. Its objects are to visit and care for the crippled, invalid, and delicate children of the poor; to provide medical advice with special treatment and food if necessary, surgical apparatus, chairs, &c., admissions to hospitals, convalescent homes, and country cottages; and to seek to ameliorate the conditions and brighten the lives of sick and suffering children in the two towns. During the year 110 children were visited and their names will remain on the books until the visitors are satisfied that all has been done that is possible; and thanks to the medical officer of health of Brighton, Dr. Duncan Forbes, several cases which came under the notice of the association were admitted to the sanatorium for treatment of tuberculosis in the bones and joints. The association expects the parents to pay their share in the expenses according to the means at their disposal. The movement is receiving considerable support, and in the first 12 months of its existence has done a beneficent work. Bearing in mind the many kindred organisations that are at work in Brighton and Hove, it certainly cannot be said of these towns that they are behindhand in their endeavours to improve the race.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.

DAVIES, T. B., M.B., B.S. Lond., has been appointed House Surgeon at University College Hospital.

HAVELOCK, SYDNEY, M.B., B.S. Durh., D.P.H., has been appointed Second Assistant Medical Officer to the Newcastle Education Committee.

HERRING, J. F., L.R.C.P. & S. Edin., has been appointed Medical Officer and Public Vaccinator to the Atherstone Union and Medical Officer of Health for the Atherstone Rural District Council.

HIGGS, FREDERICK W., M.B. Lond., M.R.C.P. Lond., has been appointed Physician to In-Patients at the Belgrave Hospital for Children.

MCCULLY, D., M.R.C.S., L.R.C.P. Lond., has been appointed Obstetric Assistant at University College Hospital.

MACILWAINE, J. E., M.D., Ch.B. R.U.I., D.P.H., has been appointed House Physician to the Royal Victoria Hospital, Belfast.

MCKAY, ROBERT, L.R.C.P. Lond., M.R.C.S., L.D.S., has been appointed Dental Surgeon to St. Thomas's Hospital.

MORRIS, C. W., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician at University College Hospital.

NICOLL, AGNES M., M.B., Ch.B. St. And., D.P.H. Manch., has been appointed Junior Resident Medical Assistant at the Dundee East Poorhouse and Hospital.

PARKER, R. P., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Superintendent Medical Officer of Oldham Workhouse.

PRICE, L. E., L.R.C.P. Lond., M.R.C.S., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Nuneaton District of the county of Warwick.

STRAIN, THOMAS, M.D. Glasg., D.P.H. Camb., has been appointed Medical Officer of Health and Medical Superintendent of the Isolation Hospital of the Urban District of Barnes.

WALKER, W., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Mid-Calder District of the county of Edinburgh.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ABERDEEN POORHOUSE.—Senior Resident. Salary £200 per annum, with board.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham-road, S.W.—House Surgeon for six months. Salary at rate of £60 per annum, with board, residence, &c.

BIRKENHEAD UNION INFIRMARY AND SANATORIUM.—Senior Resident Assistant Medical Officer. Salary £120 per annum, with board, washing, and apartments.

BIRMINGHAM CITY HOSPITAL, Lodge-road.—Assistant Medical Officer. Salary £120 per annum, with board, residence, &c.

BOURNEMOUTH, ROYAL BOSCOMBE AND WEST HANTS HOSPITAL.—House Surgeon for six months. Salary £80 per annum, with board, lodging, and washing.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon. Salary £100 per annum.

BRIGHTON, SUSSEX COUNTY HOSPITAL.—Assistant House Surgeon, unmarried. Salary £60 per annum, with apartments, board, and laundry.

BRISTOL ROYAL INFIRMARY.—Two House Physicians and One House Surgeon. Salary £100 each per annum. Also One Obstetric and Ophthalmic House Surgeon, and One Throat, Nose, and Ear House Surgeon. Salary £75 each per annum. Also Casualty Officer for six months. Salary £50 per annum. Apartments, board, and laundry are provided.

CAPETOWN, SOMERSET HOSPITAL.—Two Assistant Medical Officers. Salary £200 per annum, with rations and quarters.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn-road, W.C.—House Surgeon. Salary at rate of £50 per annum, with board and residence.

CHESHIRE EDUCATION COMMITTEE.—Third Assistant Medical Inspector of School Children. Salary £350 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House Physician for six months. Salary at rate of £75 per annum, with board, washing, and residence.

DAVOS, QUEEN ALEXANDRA SANATORIUM.—Junior Pathologist and Bacteriologist.

DELAMERE FOREST, CHESHIRE, CROSSLEY SANATORIUM.—Assistant Medical Officer. Salary £100 per annum, with board, apartments, and laundry.

DUDLEY, GUEST HOSPITAL.—Assistant House Surgeon for six months. Salary £75 per annum, with residence, board, and washing.

DUNBARTON COUNTY SECONDARY EDUCATION COMMITTEE.—Two Medical Inspectors of School Children. Salary £300 per annum.

ECCLESALL BIERLOW UNION WORKHOUSE.—Resident Assistant Medical Officer. Salary £150 per annum, with board, washing, and apartments.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge-road, London, S.E.—House Surgeon for five months. Salary at rate of £60 per annum, with board, residence, and washing.

GRAVESEND HOSPITAL, KENT.—House Surgeon. Salary £100 per annum, with board and residence.

HARRIS PARISH COUNCIL.—Medical Officer and Public Vaccinator. Salary £110 per annum.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—Honorary Dental Surgeon.

LEITH HOSPITAL.—Medical Registrar.

LINCOLN COUNTY HOSPITAL.—Senior House Surgeon, unmarried. Salary £125 per annum, with board, lodging, and washing.

LIVERPOOL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Mount Pleasant.—Assistant Medical Officer and Pathologist. Salary £200 per annum.

LIVERPOOL INFECTIOUS DISEASES HOSPITAL.—Assistant Resident Medical Officer, unmarried. Salary £120 per annum, with board, lodging, and washing.

LONDON TEMPERANCE HOSPITAL.—Assistant Resident Medical Officer for six months. Salary at rate of 50 guineas per annum, with board, residence, and washing.

MAIDSTONE, WEST KENT GENERAL HOSPITAL.—Assistant House Surgeon, unmarried. Salary £80, with board and residence.

MANCHESTER, CHORLTON-ON MEDLOCK DISPENSARY.—Resident House Surgeon, unmarried. Salary £120 per annum, with rooms and attendance.

MIDDLESBROUGH, NORTH RIDING INFIRMARY.—House Surgeon. Salary £100 per annum, with residence, board, and washing.

NATIONAL DENTAL HOSPITAL AND COLLEGE, Great Portland-street, W.—Anæsthetist.

OXFORD, RADCLIFFE INFIRMARY AND COUNTY HOSPITAL.—House Physician and Junior House Surgeon, both unmarried and for six months. Salary in each case at rate of £80 per annum, with board, &c.

PARK HOSPITAL FOR CHILDREN, Hither Green, S.E.—Assistant Medical Officer. Salary £150 per annum, with board, lodging, and washing.

PLYMOUTH, SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Assistant Surgeon.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham, N.—Pathologist. Salary £50 per annum. Also Honorary Anæsthetist once a week. Salary £20 per annum.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Resident Medical Officer for four months. Salary at rate of £60 per annum, with board, residence, and washing.

RAINHILL COUNTY ASYLUM, near Liverpool.—Assistant Medical Officer, unmarried. Salary £150 per annum, with apartments, board, attendance, and washing.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, and washing.

ROYAL LONDON OPHTHALMIC HOSPITAL, City-road, E.C.—Medical Officer in Charge of Department for X Rays and Electro-therapy. Salary at rate of £60 per annum.

ROYAL NAVAL MEDICAL SERVICE.—Twelve Commissions.

SALISBURY INFIRMARY.—Assistant House Surgeon, unmarried. Salary £50 per annum, with apartments, board, lodging, and washing.

SHEFFIELD ROYAL INFIRMARY.—Seventh Resident Medical Officer. Salary £60 per annum, with board and residence.

SOUTHAMPTON, FREE EYE HOSPITAL.—House Surgeon. Salary £100 per annum, with board and residence.

WEST LONDON HOSPITAL, Hammersmith-road, W.—Honorary Medical Registrar.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.—Resident House Surgeon. Salary £120 per annum, with board and lodging.

WINCHESTER, ROYAL HAMPSHIRE COUNTY HOSPITAL.—House Physician.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of a vacancy as Certifying Surgeon under the Factory and Workshop Act at Broughton Astley, in the county of Leicester.

Births, Marriages, and Deaths.

BIRTHS.

EWENS.—On Jan. 20th, at West Chase, Maldon, Essex, the wife of Henry L. Ewens, M.D., of a son.

GARDINER.—On Jan. 15th, at Dunmow, Essex, the wife of J. Napier Gardiner, M.D., of a daughter.

HOVENDEN.—On Jan. 15th, at Compton Lodge, East Sheen, S.W., the wife of Arthur C. Hovenden, M.B., B.S. Lond., of a son.

MARRIAGE.—On Jan. 23rd, at 109, Harley-street, W., the wife of H. J. Marriage, M.B., B.S. Lond., F.R.C.S. Eng., of a son.

NEWINGTON.—On Jan. 18th, at The Croft, Edenbridge, Kent, the wife of C. W. H. Newington, M.R.C.S., L.R.C.P., of a son.

MARRIAGES.

IRWIN—SINCLAIR.—On Jan. 17th, 1911, at Fitzroy Church, Belfast, by the Rev. William Colquhoun, B.A., assisted by the Rev. Charles Davey, B.A., Samuel Thompson Irwin, M.B., M.Ch., F.R.C.S., Belfast, son of John Irwin, Bovally, Limavady, to Mary Jemima (May), only daughter of the late A. W. Sinclair, J.P., Newry, and Mrs. Sinclair, 1, Wellington Park-terrace.

DEATHS.

MELLAND.—On Jan. 17th, at Victoria Park, Rusholme, Manchester, Frederick Melland, M.R.C.S., L.S.A., in his 93rd year.

POWER.—On Jan. 18th, at Bagdale Hall, Whitby, Yorkshire, Henry Power, M.B. Lond., F.R.C.S. Eng., in his 81st year.

TYRRELL.—On Jan. 20th, at "Claremont," Malvern, Walter Tyrrell, M.R.C.S., L.S.A., aged 79 years.

VEASEY.—On Jan. 17th, at Aspley Guise, Beds, Henry Veasey, F.R.C.S., aged 92 years.

VULLIAMY.—On Jan. 23rd, after a short illness, Justin Theodore Vulliamy, M.R.C.S., aged 42 years.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

A DIABETES CURE.

A CORRESPONDENT recently submitted to us a diabetes cure with the request to have it examined. He was called to see a patient who had been taking it. She was unstable on her legs, excited, and had dilated pupils—symptoms which she attributed to the nostrum. It evidently consisted of the dried leaves of some herb. Submitted to analysis in THE LANCET Laboratory no alkaloid could be found, but there was a decided amount of tannin present and an aromatic oil. The curator of the Museum of the Pharmaceutical Society of Great Britain, Mr. E. M. Holmes, F.L.S., F.E.S., kindly examined the "remedy." He expressed the opinion that it was Polygonum hydropiper, L., commonly known as water pepper. The fruits of Polygonum were, he states present, and although the few perfect leaves evident would do either for the spiral leaves of P. hydropiper or for the ordinary leaves of P. aviculare, the herb had the biting taste characteristic of water pepper. P. hydropiper is used for dropsy and P. aviculare for difficulty of passing urine, so that both would appear to have some action on the kidneys. According to W. T. Fernie, M.D. ("Herbal Simples"), the water pepper, or arsmart, grows abundantly by the sides of lakes and ditches in Great Britain. It bears a vulgar English name signifying the irritation which it causes when applied to the fundament; and its French sobriquet, *culrage*, conveys the same meaning:—

"An erbe is the cause of all this rage
In our tongue called culrage."

"Fleas will not come into rooms where this herb is kept. It is used for curing proud flesh in the sores of animals, and the leaves serve the purpose of a mustard poultice. A piece of the plant may be chewed to relieve toothache, as well as to cure small ulcers of thrush in the mouth. It has been used in jaundice and cholera. Another polygonum, the great bistort, is strongly astringent, and has been used for a spongy state of the gums." The packet containing the remedy bore the inscription "Van Veen and Co., Import van China and Japan, Amsterdam," and also an inscription written in Chinese characters.

DEVONSHIRE SUPERSTITIONS.

THE *Bristol Times and Mirror* states that in some parts of Devonshire a mother believes that if she imprisons a live spider in a nutshell and ties it round her infant's neck when the child is suffering from whooping-cough, that the disease will disappear when the spider dies. This newspaper remarks that a little girl went to a Tiverton shopkeeper and said to him, "Will you please give mother a nut to put a spider in, as baby's got the whooping-cough."

THE EASY SALE OF PISTOLS.

THE ease with which the sale of pistols may be conducted without compliance with the provisions of the Act of Parliament which is supposed to regulate such transactions was exemplified recently in a prosecution at the Guildhall police court. The police at Canterbury found there a man in possession of a revolver and cartridges without a licence or permit to carry firearms. He was a perfectly respectable man, and he gave the police full information as to how and where he purchased the revolver in London, with the result that proceedings were taken against Ernest Reeves, an assistant in the Anglo-Saxon Motor and Cycle Company, of Newgate-street. It was proved that the purchase was made without any of the prescribed formalities being observed at a branch establishment of the firm named, the defendant alleging that the customer came to see the goods, which had been obtained expressly for him from the head office, on Christmas Eve, just before closing-time; that he said he would take them with him, and that in the pressure of business he was allowed to do so, instead of being referred to the Newgate-street establishment as intended by the defendant. An awkward circumstance for the defendant to explain was the fact that the bill given to the purchaser contained no mention of a revolver, the sum paid being described as for repairing a gun. This he sought to explain as a slip due to copying a similar entry of "repair gun" made already on the same day in the day-book. A fine of £5 was inflicted with the alternative of a month's imprisonment, the Alderman expressing regret that he could not make the punishment four times as heavy.

APT HOSPITALITY.

THE annual dinner to the coachmen and chauffeurs in the employ of medical men in Leicester took place at the De Montfort Hotel, Leicester, on Saturday, Jan. 21st. A hearty vote of thanks was passed to the medical men of the town for providing the necessary funds.

THE Council of the Chelsea Hospital for Women states, for the information of any that may receive unauthorised appeals, that it has discontinued the use of collecting boxes outside the hospital precincts.

E. C. A. will find the answer to his question not very clearly given in the Medical Acts. The representation by an unqualified person that he is a duly registered practitioner is punishable.

ERRATUM.—In our issue of Jan. 21st, p. 148, by a printer's error, Mr. R. F. Mann was referred to as photographer and assistant in the electrical department of the Willesden Hospital, instead of the *Middlesex* Hospital.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

THE following Congresses, Conferences, and Exhibitions are announced for 1911:—

Feb. 20th-25th (Cairo).—Fifth International Congress for the Blind.
March 2nd-6th (Berlin).—Thirty-second Balneological Congress.
" 23rd (Paris).—First Congress of French Medical Journalists.
April (Berlin).—German Surgical Congress. (Thirty-ninth Annual Meeting.)
April 4th-7th (London).—Fourth Annual Nursing and Midwifery Conference and Exhibition.
April 18th-20th (Paris).—Third Congress of Physiotherapy of French-speaking Physicians.
" 19th-22nd (Wiesbaden).—Twenty-eighth German Congress of Internal Medicine.
" 20th-22nd (Groningen).—Thirteenth Nature and Medical Congress.
May 30th (The Hague).—International Congress on Opium.
May (Washington).—Conference on the Protection of Industrial Property. (Question of False Marking of Goods.)
May-October (Dresden).—International Hygiene Exhibition.
May-October (London, Crystal Palace).—Festival of Empire Imperial Exhibition. (Profits to King Edward VII. Hospital Fund.)
May-October (?) (London, Shepherd's Bush).—Coronation Exhibition.
June (Paris).—First Congress of the International Medical Association for the Prevention of War.
" (Los Angeles, Cal.).—American Medical Association.
June 5th-8th (Kolberg, Prussia).—Fifth International Congress of Thalassotherapy.
June and July (Romford).—Town Planning and Modern House and Cottage Exhibition.
July (Birmingham).—British Medical Association.
July 24th-29th (Belfast).—Congress of the Royal Sanitary Institute.
August 15th-21st (Dublin).—Royal Institute of Public Health.
" 30th-Sept. 6th (Portsmouth).—British Association.
August or September (Berlin).—Third International Laryngo-Rhinological Congress.
September (Brussels).—Exhibition of Fractures.
" (Turin).—International Congress of Pathology.
" (Genoa).—International Exhibition of Marine Hygiene.
September-November (Antwerp).—International Exhibition of Alimentation, Brewing, Wines, and Liqueurs.
Sept. 11th-15th (Berlin).—National Congress for the Study and Prevention of Infantile Mortality (*Goultes de Lait*).
" 11th-16th (The Hague).—Thirteenth International Congress on Alcoholism.
" 18th-23rd (Sydney).—Australasian Medical Congress.
" 18th-24th (Turin).—Fourth National Congress of Hygiene.
" 24th-30th (Rome).—International Congress on Tuberculosis.
" 25th-29th (Rome) Seventh International Congress of Dermatology and Syphilology.
October (Cologne).—International Congress of Criminal Anthropology.
Oct. 1st-4th (Liége).—Second Congress of Alimentation.
Dec. 4th-9th (Havana, Cuba).—American Public Health Association.
(Date not fixed) (Montreal).—Canadian Medical Association.
(Date not fixed) (Rome).—International Exhibition of Social Hygiene.
(Date uncertain) (Turin).—International Exhibition of Industry and Labour.

In 1912:—
Spring (London).—Second Optical Convention.
July (?) (Cologne).—International Congress of Nurses.
September (Prague).—International Congress of Radiology and Medical Electrology.
September (Berlin).—Sixth International Congress of Obstetrics and Gynæcology.
" Visit of German Medical Men to America.
Nov. 22nd-29th (Washington, D.C.).—Fifteenth International Congress of Hygiene and Demography.

In 1913:—
(London).—Seventeenth International Congress of Medicine.
(London).—Historical Medical Exhibition. (Organised by Mr. Henry S. Wellcome.)
(Dresden (?)).—International Conference on Cancer.
(Washington).—Congress of American Physicians and Surgeons.
August (Buffalo).—Fourth International Congress of School Hygiene.

In 1914:—
(Vienna).—Third International Congress for Professional Diseases.

In 1915:—
(London).—International Prison Congress.
(London).—Imperial Exhibition (?)

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

TUESDAY.

A SPECIAL GENERAL MEETING OF FELLOWS OF THE SOCIETY will be held at Steinway Hall, Lower Seymour-street, W.: at 5 P.M.

THURSDAY.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION (Hon. Secretaries—G. F. Blacker, J. H. Targett), at 11, Chandos street, W.: at 8 P.M.

Discussion:

On the Indications for, and Technique of, Cæsarean Section, and its Alternatives in Women with Contracted Pelves, who have been Long in Labour and Exposed to Septic Infection (opened by Dr. Amand Routh). The following gentlemen will take part:—Dr. Hastings Tweedy, Dr. Briggs, Dr. Edge, Dr. Fitzgerald, Dr. Arnold Lea, Dr. H. Spencer, Dr. Rayner, Dr. Lewers, Dr. Ernest Shaw, and Dr. Gow.

The Discussion will be continued on the following day.

FRIDAY.

LARYNGOLOGICAL SECTION (Hon. Secretaries—L. Hemington Pegler, W. H. Kelson), at 11, Chandos-street, W.: at 5 P.M.

Cases and Specimens:

By Dr. William Hill, Mr. F. Rose, Dr. L. H. Pegler, Mr. H. Tilley and others.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION, at 11, Chandos-street, W.: at 8 P.M.

Discussion (continued from Thursday):

The following gentlemen will take part:—Dr. Maxwell, Dr. Munro Kerr, Dr. Herman, Dr. Lloyd Roberts, Mrs. Scharlieb, Dr. A. W. Wallace, Dr. A. W. Russell, Dr. H. Roberts, Dr. Eden, Dr. S. Cameron, and the President (Dr. Macnaughton-Jones).

SECTION OF ANÆSTHETICS (Hon. Secretaries—R. W. Collum, Mrs. Dickinson Berry): at 8.30 P.M.

Dr. McCardie: Death during Anæsthesia.
Mr. Gill: Anæsthesia in Post-pharyngeal Abscess.
Dr. Blumfeld: Reflex Effects from Stimulation of the Nasal Mucous Membrane during Anæsthesia.
Dr. Hughes: Cheyne-Stokes Respiration during Anæsthesia.
Mr. Coleman: A New Form of Stop-cock for Gas and Air Administration.

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hospital, Tottenham, N.

THURSDAY.—4.15 P.M., Clinical Cases.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital.

FRIDAY.—8 P.M., Pathological Exhibits will be shown.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.

WEDNESDAY.—5 P.M., Prof. F. W. Edridge-Green: Colour Vision and Colour Blindness—The Theory and Facts of Colour Vision and Colour Blindness (Hunterian Lecture).

FRIDAY.—5 P.M., Prof. F. W. Edridge-Green: Colour Vision and Colour Blindness—The Detection of Colour Blindness from a Practical Point of View (Hunterian Lecture).

UNIVERSITY OF LONDON (ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.).

THURSDAY.—5 P.M., Mr. R. H. Burne: Comparative Anatomy of the Internal Ear.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. J. G. Little: Clinique (Skin). 5.15 P.M., Lecture:—Dr. P. Kidd: Some Affections of the Mediastinum.

TUESDAY.—4 P.M., Dr. J. Taylor: Clinique (Medical). 5.15 P.M., Lecture:—Dr. W. H. Stoddart: On Nervous Exhaustion.

WEDNESDAY.—4 P.M., Mr. C. A. R. Nitch: Clinique (Surgical). 5.15 P.M., Lecture:—Mr. L. Mummery: Piles, their Pathology and Treatment.

THURSDAY.—4 P.M., Mr. E. L. Evans: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. J. E. Squire: Bronchitis.

FRIDAY.—4 P.M., Mr. H. Tilley: Clinique (Ear, Nose, and Throat).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. Dr. Simson: Diseases of Women. 12 noon: Pathological Demonstration:—Dr. Bernstein. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Dr. Beddard: Practical Medicine (Lecture III.).

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M.: Mr. Rtherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. R. Jones: Preventible Insanities.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Dr. Simson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Mr. Ll. Williams: Extraction of Teeth, When and How to Extract.

THURSDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12.15 P.M., Lecture: Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Practical Surgery (Lecture III.)

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Mr. Bernstein: Clinical Pathology.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.30 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

TUESDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Wells: Medicine. 3.15 P.M., Mr. R. Carling: Surgery. 4 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. 4.30 P.M., Radiography. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

FRIDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

SATURDAY.—2 P.M., Operations. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10 A.M., Surgical Out-patient (Mr. E. Gillespie), 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. W. Carson).

TUESDAY.—Clinic:—10 A.M., Medical Out-patient (Dr. A. G. Auld). Surgical (Mr. Howell Evans); Gynæcological (Dr. A. E. Giles). 2.30 P.M., Operations. 3.30 P.M., Medical In-patient: (Dr. A. J. Whiting). 4.30 P.M., Lecture:—Mr. F. Trewby: Obstruction to Free Respiration and its Influence on Anæsthesia.

WEDNESDAY.—Clinics:—2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Dr. A. H. Pirie).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappel).

FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. E. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie).

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. F. Batten: Polioencephalo-myelitis.

FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. Ormerod.

HOSPITAL FOR SICK CHILDREN (UNIVERSITY OF LONDON), **Great Ormond-street, W.C.**

TUESDAY.—5.15 P.M., Demonstration:—Mr. H. A. T. Fairbank: Deformities—Torticollis; Congenital Affections of the Upper Extremity; Obstetric Paralysis. (Special Post-Graduate Course.)

THURSDAY.—4 P.M., Demonstration:—Dr. Colman: Medical Cases.

FRIDAY.—5.15 P.M., Demonstration:—Mr. H. A. T. Fairbank: Deformities—Kyphosis; Lordosis; Neurotic Spine; Pigeon-toe (Special Post-Graduate Course.)

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester-square, W.C.

THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell: Fungous Diseases of the Hair—I., Hyphogenic Sycosis; II., Tinea.

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Dr. C. H. Melland: Some Features of Heart Disease. (Post-Graduate Clinic.)

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (31st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (1st).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (2nd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M. and 2.30 P.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.), Central London Throat and Ear (Minor. 9 A.M., Major, 2 P.M.).

SATURDAY (4th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.) Hospitals operations are performed daily.

The following journals, magazines, &c, have been received:—International Journal of Surgery, Bulletin de l'Académie de Médecine, Public Health Reports of the Marine Hospital Service, U.S.A., Birmingham Medical Review, Annual Medical Report to the Hampshire County Council, Allgemeine Medizinische Central-Zeitung, La Semana Médica, Revue de Chirurgie, Revue de Médecine, Asylum News, Review of Neurology and Psychiatry, Transactions of the Society of Tropical Medicine and Hygiene, British Journal of Dental Science, The Journal of Laryngology, Journal of Anatomy and Physiology, The Eugenics Review, London Hospital Gazette, Centralblatt für Allgemeine Pathologie und Anatomie, Allgemeine Wiener Medizinische Zeitung, American Journal of Surgery, Gazette des Hôpitaux, Electrical Engineer, Journal of Tropical Medicine and Hygiene, Symon's Meteorological Magazine, Dublin Journal of Medical Science, American Journal of Obstetrics, The St. Paul Medical Journal, Indian Medical Record, Gazzette Degli Ospedali, Uric Acid Monthly, Indian Public Health, The Quarterly Bulletin of Northwestern University School, Chicago, New York Medical Journal, Revue Clinique d'Andrologie et de Gynécologie, Electrical Review, Science Progress.

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Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

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Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

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MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

The Index and Title-page to Vol. II. of 1910 were given in THE LANCET of Dec. 31st, 1910.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 25th, 1911.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Jan. 19	30·64	W.	...	43	41	40	39	40	Overcast
,, 20	30·55	W.	...	45	42	35	36	36	Foggy
,, 21	30·29	W.	...	40	40	35	39	39	Overcast
,, 22	30·34	S.W.	...	41	41	37	38	39	Overcast
,, 23	30·37	S.	0·07	43	42	37	38	38	Overcast
,, 24	30·39	S.W.	...	63	47	35	36	36	Foggy
,, 25	30·26	S.W.	...	56	51	36	43	45	Overcast

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